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In the Supreme Court of the United States.

OCTOBER TERM, 1920.

ECONOMY LIGHT & POWER COMPANY,	}	No. 104.
appellant,		
v.		
THE UNITED STATES OF AMERICA.		

*APPEAL FROM THE UNITED STATES CIRCUIT COURT OF
APPEALS FOR THE SEVENTH CIRCUIT.*

BRIEF FOR THE UNITED STATES.

This is an appeal from the judgment of the Circuit Court of Appeals for the Seventh Circuit affirming a decree enjoining appellant from continuing the construction of a dam in and across the Desplaines River at Dresden Heights at a point just north of where it joins the Kankakee River, forming the Illinois River.

STATUTE INVOLVED.

The bill was filed upon the ground that the dam was in a navigable river of the United States and was being constructed without compliance with

section 9 of the river and harbor act of March 3, 1899 (30 Stat. c. 425, pp. 1121, 1151), which is as follows:

That it shall not be lawful to construct or commence the construction of any bridge, dam, dike, or causeway over or in any port, roadstead, haven, harbor, canal, navigable river, or other navigable water of the United States until the consent of Congress to the building of such structures shall have been obtained and until the plans for the same shall have been submitted to and approved by the Chief of Engineers and by the Secretary of War: *Provided*, That such structures may be built under authority of the legislature of a State across rivers and other waterways the navigable portions of which lie wholly within the limits of a single State, provided the location and plans thereof are submitted to and approved by the Chief of Engineers and by the Secretary of War before construction is commenced: *And provided further*, That when plans for any bridge or other structure have been approved by the Chief of Engineers and by the Secretary of War, it shall not be lawful to deviate from such plans either before or after completion of the structure unless the modification of said plans has previously been submitted to and received the approval of the Chief of Engineers and of the Secretary of War.

RULINGS OF THE COURT BELOW.

Both the District Court and the Circuit Court of Appeals concurred in finding that the river in question was a navigable river, and the injunction was granted upon this ground.

The Government does not contend that either at the time the suit was brought or at the time the building of the dam was commenced the river was actually being used for navigation. The contention, however, is that it was and is a river of navigable capacity, and in connection with other navigable waters constitutes a highway of interstate commerce, and was therefore within the jurisdiction of Congress. It had in the early history of the country been used for such navigation as was, at that time, common upon rivers. On account of changes in the means of transportation, and for other reasons that will appear later, the actual use of the river for this purpose had for the time being ceased. The Court of Appeals, in its opinion, sums up the matter thus:

From the latter part of the seventeenth century through the first third of the nineteenth century men engaged in the fur trade passed up and down the Chicago and Desplaines Rivers in canoes and flat boats very regularly. Fourteen specific instances of the use of the Desplaines down to the year 1830 are shown in the evidence, as follows: Trips to Chicago: Joliet and Marquette, 1673; Perrault, 1783; Joutel, 1688;

Hubbard, 1819; Ebenezer Child, 1821; Tonty, 1680; La Salle, 1681; Fonda, 1825. Trips from Chicago: Father Membre, 1682; St. Cosme, 1698; Hubbard, 1818; Marquette, 1674; Howard, 1790; Furman, 1830. Very many other trips made during the same period, not so well authenticated, are disclosed in the evidence, and numerous historical references to the Chicago-Illinois route. No doubt other instances of its use may properly be inferred. It was employed by the American Fur Company down to 1825, and then abandoned for other routes. The trial judge found, as the record shows, that there is no evidence of actual navigation within the memory of living men, and therefore there would be no present interference with navigation by the building of the proposed dam. But it was held that the evidence shows the Desplaines a navigable water of the United States, preserved as such by the legislation of Congress.

In the early days the fur trade was a leading branch of commerce in the western world, and this trade was one of the characteristics of the Desplaines River. Large quantities of supplies of various kinds needed by the settlers in a new country were also transported over the Desplaines during the same period in boats of the size and character then commonly used in river commerce, this transportation being carried on between Chicago, St. Louis, and other points. Canoes of several tons burden were used; some were 35 feet long by 6 feet

wide, some 33 feet long by 4½ feet wide, worked by paddles and occasionally a sail, and had a crew of eight men, carrying as much as 6,000 pounds of freight as well as 1,000 pounds of provisions. The pirogues were manned by six or seven oars; the batteaux were larger than the pirogues; the Durham boats were heavy freight craft, 60 feet long, 8 feet wide, 2 feet deep, with a capacity of 15 tons, drawing 20 inches of water.

Commerce of this character existed until about the year 1825. After that year the fur trade having receded to interior portions of Illinois was reached more generally by horses. After the year 1848, when the Illinois and Michigan Canal was constructed, commerce that had formerly been carried on the Desplaines River was carried on the canal. Radical changes had taken place in the condition of the river as heretofore shown, which resulted in a diminution of the flow in the river, and this was one of the causes for the nonuse of the river. (256 Fed. Rep., p. 797.)

The court then stated that, beginning with the year 1835, several dams had been constructed across this river, which, of course, obstructed the commerce that had been formerly carried on, but that, prior to 1889, all of them had been abandoned except one, which was the State Dam No. 1 at Joliet. Upon these findings of fact the court held that the Desplaines River was "a navigable

stream of the United States, or one capable of bearing interstate commerce via the Illinois and Mississippi, at the time of the passage of the acts of 1890 and 1899."

STATEMENT OF FACTS.

As the pivotal point involved in this case is the navigability of the Desplaines River, some salient facts may be referred to here before any attempt is made to review the evidence.

A statement of the physical characteristics of the river will appear later, but here it may be noted that the U. S. Government caused a meander survey to be made of the river in 1821; a certified copy of the U. S. surveyor's notes in evidence (R. pp. 2301-2344) refers to the point on the river where it connects with Portage Lake as "head of navigation." Portage Lake was the connecting link between the Chicago River and the Desplaines, at times with and at times without portages. Here we only pause to note that this commerce was referred to by R. Graham and Joseph Philips in a report dated April 4th, 1819, to the Honorable J. C. Calhoun, Secretary of War, which, in referring to the Chicago River, the Desplaines, and Portage Lake, says: "Between the heads of these two arms" (Chicago River and Portage Lake) "is also a gutter which is dry in the dry seasons of summer and fall and full of water in the spring, and when thus filled with water the

boats of 6 or 8 tons engaged in the Mackinaw and Mississippi trade run through backwards and forwards so as to make no portage between Mackinaw and the Mississippi River." *At the time he made this report Joseph Philips was Chief Justice of the Illinois Supreme Court.*

The character and extent of the actual navigation being carried on at the time of the survey by the American Fur Company with brigade of 12 and 13 boats navigating from Mackinac Island to points along the Illinois River over the Chicago, Desplaines, Illinois route will appear in its proper order.

Counsel for appellant stresses his claim that there is no evidence of navigation of the Desplaines by living witnesses.

The evidence discloses that from 1848 the Desplaines was paralleled by the Illinois and Michigan Canal, giving an obviously superior means of navigation. Appellant's brief, page 16, calls attention to the existence of a dam in 1826 at the site of the proposed dam, and the map attached to it also shows three dams erected in 1833, one in 1835, two in 1839, one in 1841, and one in 1846, and it is also in evidence that the construction of the Illinois-Michigan Canal was begun in 1836. (R. 772.) The obstructions noted prevented practical navigation of the Desplaines subsequent to 1833, which was therefore 77 years prior to the taking of testimony in this case, and this fact made the possibility

of any evidence of practical navigation of the river within "living memory" exceedingly remote, although one witness (Reed), 86 years of age when the testimony was taken in this case, did testify as to such use, apparently in 1831. (R. Vol. III, p. 2102.)

Counsel attempts to say that the War Department "assured appellant's predecessor that the Desplaines River was not a navigable stream." While this is not material to the issue, we here place before the court the facts showing that no such assurance was ever given or asked or considered for a moment.

In the first place, attention is again called to the reports of Long and Graham and Philips, showing actual contemporaneous navigation in 1819.

In 1867 the War Department caused a survey of the Illinois River to be made under Major General J. H. Wilson, whose first report is dated May 13th of that year. The work contains a survey with plans and estimates of costs for a navigable waterway 14 feet deep from Lockport, Illinois, by way of the Desplaines and Illinois Rivers to the mouth of said Illinois River. The report recommends the use of the Desplaines River from the head of Lake Joliet to the mouth of the river, and says, "It must be remembered that this river is not the exclusive property of those living on its banks. It forms already an important link in a network of river navigation extending with its

various branches through seventeen States of the Union." (R. 652.)

The report of Assistant Engineer F. C. Doran, January 9th, 1875, also recommends the improvement of the river from Joliet to La Salle; likewise Major Benyaurd's report, dated September 2, 1882, the Comstock Board of Engineers, January 10th, 1887; the report of Captain W. L. Marshall, February 28th, 1890; and the report of the Ernst Board, December 12th, 1905. An act of Congress approved June 13th, 1902, contained an appropriation for "making surveys * * * as may be required to determine the feasibility of * * * and to prepare estimates of the cost of a navigable waterway 14 feet in depth from Lockport, Illinois, by way of Desplaines and Illinois Rivers to the mouth of said rivers." * * * (R. 654-8.)

These references are here made for the purpose of showing that the actual navigation and navigability of the Desplaines River was recognized by the Government in an official report as early as 1819 and that the General Government has had in contemplation the improvement of the river for purposes of navigation since 1867.

It was in the light of the information afforded by the Chief of Engineers of the War Department in 1867 and 1887 that the Illinois Legislature in 1889 undertook the construction of a Sanitary and Ship Canal designed to create a deep waterway from Lake Michigan to the Mississippi River. The Illi-

nois Legislature concurrently, with the passage of the act of 1889, providing for the construction of the canal passed a joint resolution in which it stated that it was the policy of the State to procure construction of a waterway of the greatest practical depth and usefulness and for navigation from Lake Michigan via the Desplaines and Illinois Rivers to the Mississippi River, and requested the United States to aid in the construction of a channel not less than 160 feet wide and 22 feet deep with such a grade as to give a velocity of 3 miles per hour from Lake Michigan at Chicago to Lake Joliet, a pool of the Desplaines River immediately below Joliet, and to project a channel of similar capacity of not less than 14 feet deep from Lake Joliet to La Salle. (R. 2392; Ill. Session Laws 1889, p. 376.)

Thereupon the State of Illinois constructed the Sanitary and Ship Canal from the mouth of the Chicago River to Dam No. 1 in Joliet where it emptied into the Desplaines River and made a junction with the Desplaines and the Illinois and Michigan Canal. The waters of Lake Michigan were turned into the Desplaines January 17th, 1900, thereby adding to the Desplaines a flow of 300,000 cubic feet per minute. That it was the policy of the State to develop the water power created is shown by sections 5 and 6 of the act of May 14, 1903, empowering the Sanitary District to develop, use, and sell the water power created above the upper basin of the Illinois and Michigan Canal; the water

power at Joliet being already developed by State Dam No. 1.

There had been, counsel for appellant says, a dam near the confluence of the Desplaines and Kankakee as early as 1826, but had long since been abandoned, as had all the other dams on the Desplaines except State Dam No. 1 at Joliet. Obviously, the water power capable of being developed on the site of the old dam was, prior to the turning in of the waters of Lake Michigan through the Sanitary and Ship Canal, of no importance. The addition of the waters of Lake Michigan, however, create a water power of vast potential value.

There was, moreover, no riparian right in the owners of the land on the left bank of the stream at Dresden Heights (the site of the proposed structure) to dam the stream, for the reason that the Desplaines River was, in a state of nature, a navigable stream and for the further reason that the right bank of the stream was the property of the Illinois and Michigan Canal commissioners, a part of the Illinois State government.

Some circumstances not disclosed by this record brought the value of the water power in question to the attention of Charles A. Munroe, president of the appellant company, and after the waters of Lake Michigan were turned into the Desplaines he evolved a plan to get possession of both sides of the Desplaines River and exploit the water

power created by the expenditure of about \$63,000,000 of public money. His first step, taken in the early part of or some time immediately prior to 1904, was to get control of the lands on the left bank of the river belonging to one Griswold, and to obtain flowage rights in some 1,800 acres of the land on the same side. He did not, however, take title to the land at that time, but while Griswold still remained the apparent owner Munroe approached the Illinois and Michigan Canal commissioners for the purpose of obtaining the right to attach a dam to the right bank of the river and to obtain certain other rights.

In a contract dated September 2nd, 1904, the Illinois and Michigan commissioners for the sum of \$2,200 gave Griswold the right to construct a dam or other works across the Desplaines or Illinois River, to excavate and deepen the channel, and to flow the 90-foot reserve strip along the bank of the Illinois and Michigan Canal, provided the towpath was not flooded, and to attach the dam to the right bank of the river and left bank of the canal. Certain other rights were given Griswold and he was given permission to use the gravel or other material along the Illinois and Michigan Canal, the property of the State of Illinois, to raise the towpath bank. (Defendant's answer, Exhibit A.)

An indenture of the same date leased a 90-foot strip to Griswold for 20 years for \$500 for the entire term. (Defendant's answer, Exhibit B.)

By a third agreement Griswold was given the right to divert the waters of the Kankakee River into the Desplaines through the Kankakee feeder for 20 years for the sum of \$150 a year, with right to grantee to cancel any time after five years. (Defendant's Exhibit C.)

In both leases the lessee was given the right of renewal at the expiration of 20 years.

It was through these frugal arrangements that Mr. Munroe claims to have obtained from the State whatever rights it might have in connection with the development of water power at Dresden Heights which had resulted from the expenditure of so many millions of dollars raised by public taxation for the dual purpose of conserving the public health and completing a deep waterway connection between the Lakes and the Gulf of Mexico.

Only one obstacle now stood in the way of his success; that was the navigability of the Desplaines River. The record discloses that Mr. Munroe was a lawyer, and very obviously he would not proceed in the matter without some investigation in regard to his right to put a dam in the river.

At the very threshold of this investigation lay *The Montello*, 20 Wallace 430, in which the control of Congress over public waters was discussed, navigability defined, and the Chicago-Desplaines-Illinois route was stated to be one of the three

great avenues from the St. Lawrence to the Mississippi which were declared to be within the protective terms of the ordinance of 1787. The court had further said, "And independently of the ordinance of 1787 declaring 'navigable waters' leading into the Mississippi and St. Lawrence to be 'common highway' the true test of the navigability of the stream does not depend on the mode by which commerce is or may be conducted nor the difficulties attending navigation."

No investigation of the legal status of the matter could be entered upon without having it instantly apparent that the Desplaines was in law a navigable stream subject to the jurisdiction of Congress and that no obstruction could be placed in it without the consent of Congress or the legislature and the approval of the plans by the Secretary of War and the Chief of Engineers.

It was in such circumstances that Mr. Munroe approached the local Government engineer at Chicago to obtain some means of bridging the difficulty.

He did not, however, ask the engineer or the War Department for an opinion as to whether the Desplaines River was navigable and within the jurisdiction of Congress, but he and those with him insisted at all times that it was not navigable (R. 2871, 2108-2124, 1934-1938); that they were not seeking a permit and all that they wanted was some assurance that in the view of the War De-

partment their project would not conflict with the plans of the Ernest Board. By this means they attempted to persuade the War Department to enter into some sort of a bargain whereby if they did certain things the Government would "waive any and all objection which it may have to the progress of such water power construction" as proposed in Munroe's letter of March 20, 1906, and its inclosure (*which are not in evidence*). In the letter he stated that "the agents of the water power company in question informally claim to have secured possession of all the land on each bank of the river necessary to allow for the construction of the dam and of its accessories * * * and they likewise claim that there is no existing State law or United States law which prohibits their legally going ahead with their construction, and that no special law is needed therefor." (R. 2872.) Col. Bixby, the local engineer, in his letter dated March 27, 1906, does not attempt to pass upon the question of navigability and deals with the question upon the representation of the water power company that it is not navigable. He recommends "that the Honorable H. M. Snapp and Mr. Charles A. Munroe be informed that the War Department will waive any and all objections which it may have to the progress of such water power dam construction as proposed by Mr. Munroe's letter of March 20, 1906, and its inclosures, provided that he on the part of the power dam owners agrees, etc."

This, however, Robert Shaw Oliver, Assistant Secretary of War, in a letter to Mr. Munroe, dated June 7, 1906, declined to do. He referred to the conditions which Mr. Munroe and his associates were willing to comply with and merely said that if they were complied with they would be "in general harmony with the work of improvement recommended by the board of engineers appointed under authority of the river and harbor act, June 13, 1902, etc., * * * inasmuch, however, as Congress has not yet authorized the improvement of this river, this department does not deem it expedient to take further and definite action in the matter of approving the plans." (R. 2875.)

February 23, 1907, Mr. Isham Randolph, apparently chairman of the Internal Improvement Commission of Illinois, appointed "to investigate the various problems associated with a projected deep waterway from Lake Michigan to the Gulf of Mexico," called on the Secretary with a letter from the governor of Illinois. He represented that the work of the Sanitary District made possible the development of important water power on the Desplaines and Illinois Rivers. The account of this proceeding, which is very meager and begins on page 1935 of the abstract, states that the honorable H. M. Snapp, Mr. J. W. Woermann, and Charles A. Munroe represented the Economy Light & Power Company; Mr. I. Randolph represented the State of Illinois; and Alexander McKenzie, Chief of Engineers, was also present. Mr. Snapp

instantly stated, in reply to Mr. Randolph, that as the General Government had no right either to this property or the water power developed thereby, there could be no determination of the matter by any of the officers of the Government; that as a matter of fact all the property interest in the Desplaines Valley belonged to private individuals. "The stream is not a navigable stream. It is not a navigable stream either in law or in fact."

Secretary TAFT. How do we get any jurisdiction of it, General McKenzie?

Mr. SNAPP. Let me answer, Mr. Secretary, **A**s a lawyer you; undoubtedly have none, and I was going to bring to the attention of the Secretary—

Secretary TAFT. Why do you come here for a permit?

Mr. Snapp then explains they did not come for a permit, but for advice, to be more safe to proceed. Mr. Randolph states that the river is measured by the surveys and thinks that might make it navigable. Secretary Taft answers that has nothing to do with determining whether the river is navigable. Mr. Taft then says the application—"and it is rather informal than otherwise—is for this department to take no official action which may interfere with the State control of the water power which may be developed in the Desplaines River, etc. * * * The department is not going to take any action and has not taken any action. The advisory step taken at the in-

stance of Mr. Snapp or the persons who intended to put some sort of water-power construction in the Desplaines River was extra official and really was beyond the authority of the Chief of Engineers except as he was accommodating to express an opinion in the interest of explanation. * * * It has merely offered a friendly suggestion with reference to a possible improvement of the river which has not been authorized and which until it is authorized can not be regarded as giving any right to this Government to interfere in the use of the stream. The proposed action of the private owners here would not be in conflict with such a plan. That is an expression of an opinion with reference to existing plans, but not with respect to existing conditions. Therefore, what General McKenzie has done out of the kindness of his heart does not commit this department to any assertion of authority in the matter * * *. It is not that we approve this—it is not that we disapprove it. It is that we have nothing whatever to do with it."

From the above it is seen that the Secretary and the Engineer did not inform appellant that the stream was not navigable, but appellant informed them in regard to the matter. It did not go to the department for light on that question; it insisted that it knew that the stream was not navigable and that it sought no permission from the Government. When inquiry was made by the Illinois attorney general, October 21, 1907, Acting Secretary of

War Shaw replied, October 28, 1907, that "the Des-plaines and Illinois Rivers * * * are considered by the War Department to be navigable streams. There appears to be no record in the War Department of any action relating to the Economy Light and Power Co." (R., 2123.)

Gen. McKenzie testifying, says, at page 2117: "As I recollect that matter, the Secretary in his finding, which was an impromptu matter, made a reference to the fact of nonnavigability, but that was based principally on the presentation made by Mr. Snapp, and the fact that the Secretary did not have to decide whether it was navigable or not; that was not a part of the decision." He says, again, at page 2119: "The statements with regard to the navigability of the river and the connection of the Government with it were made by Congressman Snapp."

It is to be noted that the representatives of the Power Company, after they began their conversations with the local Chicago office, Mr. Woermann, and the local engineer expressly states in his letter to the Chief of Engineers that he talked the matter over "at intervals with Mr. Woermann while he was assistant engineer in local charge of the Illinois River survey under this office before he had been employed by Mr. Munroe, as well as since that time."

The Government considers the correspondence between the local engineer and the Assistant Sec-

retary of War with the representatives of the Economy Light & Power Company and the discussion in Secretary Taft's office in no way material to any issue in this case, but as the matter is presented in appellant's brief in such a way as to impugn the motives of Mr. Wickersham and those responsible for the institution of the suit, we feel constrained to lay the whole matter before the court before discussing that evidence material to the issues in the case.

DESCRIPTION AND HISTORY OF THE DESPLAINES RIVER.

We can not better describe the Desplaines River and recite the essential points in its history than by quoting from the opinion of the Circuit Court of Appeals, in addition to what has already been quoted, the following:

The Desplaines up to 1894.—The Chicago-Desplaines-Illinois water route, used from 1673 to 1825 by explorers and in the fur trade, was made up of portions of the Chicago and Desplaines Rivers, now some eight miles apart. It includes the Chicago River from its mouth on Lake Michigan to Robey Street, Chicago, on the west fork of the south branch, thence westerly, by water or portage, to Mud Lake, about two miles, thence to the Desplaines near Riverside, two miles, down the river to the Illinois, made by the confluence of the Desplaines and Kankakee. The part of this route between the Chicago and Desplaines is called the

Chicago divide. The Desplaines River rises near the county line between Racine and Kenosha Counties, Wisconsin, and runs in a southerly direction, parallel substantially to the west shore of Lake Michigan, through Lake and Cook Counties, Illinois, until it reaches Riverside, some 11 miles from the mouth of the Chicago River; thence it takes a southwesterly direction through Cook and Will Counties to its confluence with the Kankakee River near the east line of Grundy County. The original area of the Desplaines River Basin was 1,428 square miles, and with the changes which have been made the present area is taken at 1,392 square miles. The Desplaines River Basin is usually divided into the Upper Desplaines and the Lower Desplaines, the term Upper Desplaines applying to that portion above Riverside. The Upper Desplaines Basin has an area of 633 square miles, a general length of about 60 miles and a general width of about 10 miles, and is a true basin; has practically no true tributary basins, except Salt Creek, which has about 110 miles, entering at Riverside. It is a rolling country, originally covered with one-half to one-third in timber. Its general declivity by its flood plane is about one and a half feet per mile. The river bed is cut as a groove in a prairie, rather than the ordinary river bed, with an overflow or flood plane on either side. Originally it had a considerable quantity of swamp, marsh, and bog at headwaters; and in Lake County

and in portions of Cook County and also upon Salt Creek in Du Page County; and a lake development in Lake County from which that county derives its name.

The characteristics of the Lower Desplaines Basin, that portion below Lyons or Riverside, are that it covers by the general course of the valley about 42 miles to the confluence with the Kankakee, and has a total descent of about 102 or 103 feet. It has a true sub-basin in the Du Page River which covers 366 square miles. The total area is 795 square miles below Riverside, but outside of the Du Page River this area is only 429 miles. The valley in itself is not a characteristic valley like the Upper Desplaines, but has the appearance of being an old water course or outlet from the Great Lakes in which the modern stream follows through remnants of an ancient stream of much greater magnitude, a succession of pools and wide expanses with intermediate channels, which have not yet developed to their proper proportions, connecting these pools and water stretches. The river valley or river has two considerable tributaries aside from the Du Page, in Hickory Creek and Jackson Creek, but otherwise the drainage is essentially marginal or shore drainage.

Beginning within a mile of the township line between Riverside and Lyons is a long level expanse known as the twelve-mile level, consisting of a succession of water expanses and connecting straits or

channels from 150 feet up to a quarter or an eighth of a mile in width, in places, and with varying depths up to 10 or 15 feet in localities; these water expanses having a mud bottom which seem to be more vegetable deposits than alluvial, and which indicate originally much greater depth; and margined in by a vegetable growth. These expanses were for a long time used as ice fields by the ice interests which had their market in Chicago. Below the twelve-mile level is a succession of ponds and shallow connections in the rock, like Goose Lake and Round Lake, and others between Romeo and the twelve-mile level. This whole stretch is well described in the original land survey as a succession of swamps, ponds, lakes, and marshes connected by currents.

Below Romeo, which is 6 miles below Lyons, there is a declivity at the rate of 7 feet per mile from the Romeo highway down to the head of Lake Joliet, a distance of 11 miles, pretty uniformly distributed. Thence for a distance of about 13 miles between that and the mouth of the river there are some 10 miles occupied by pools, or Lake Joliet, which has a length of nearly 6 miles and has a width of 500 to 900 feet, and a depth originally up to 15 or 20 feet; and then a pool of over a mile in length immediately below Treats Island rapids; then Lake Du Page, some 13 miles in length, with a width of about 350 feet on the average, and with a depth of 10 feet and up-

wards, these pools being connected by intermediate rapids like the one at Treats Island and the one near the mouth of the Kankakee, and the reach of swifter and shallower water between the pool below Treats Island and the head of Lake Du Page. These distances are given only approximately, and to show some of the characteristics of the stream. This description applies to the the Desplaines River as it was known up to about 1894, when the Sanitary District works changed the conditions very radically through the valley above the city of Joliet, between there and Lyons or Riverside. The proportion of the Desplaines River itself from the end of the portage road to its mouth, or confluence with the Kankakee, that would consist of pools, would be about 60 per cent. The total distance from the portage road to the confluence with the Kankakee is about 44.5 miles. In that distance there would be the so-called 12-mile level, which is 13.7 miles, Lake Joliet, the pool below Treats Island, and Lake Du Page, aggregating 10 miles, and Goose Lake and Round Lake, and some other stretches unnamed, amounting in all to about 27 or 28 miles out of a total of 44.5. The distance from Dam No. 1 to the mouth of the river is 15.72 miles, of which about 10 miles consists of pools. This stretch is now more particularly in question. The condition of these pools if the Desplaines River were to run dry; that is, no water pass from pool to pool, would be that Lake Joliet would be

practically available for boats as before, the depth in it being from 20 to 25 feet at the maximum, and a large proportion of it having more than 10 feet.

The distance from Lake Michigan to the mouth of the Desplaines River is 58.32 miles, made up as follows:

	Miles.
From Lake Michigan to Ashland Avenue, which is substantially at the forks of the south branch of the Chicago River.....	5.5
Ashland Avenue to Ogden dam, which is across the old portage slough, on the range line, R. 12, 13, north of Summit.....	8.3
The so-called 12-mile level, actual length.....	13.7
From 12-mile level to Isle la Cache.....	6.7
Isle la Cache to Dam No. 1.....	8.4
Dam No. 1 to head of Lake Joliet.....	3
Head of Lake Joliet to mouth of Desplaines River.....	12.72
	<hr/> 58.32

A gauge record kept at Riverside for a period of 20 years from the year 1886 to 1904, both inclusive, showed the water stood at above 18 feet on the Riverside gauge an average of 4.3 days per year; at or above 13.8 feet an average of 47.6 days per year; at or above 13 feet an average of 73.2 days per year; at an elevation of 12.4 feet an average of 116.2 days per year; at or above 11.85 feet an average of 190.65 days per year.

When the water stood at 10.5 at the head of the 12-mile level at Summit, corresponding to 13 feet on the Riverside gauge, and a volume of 600 second-feet, the water in the portage swamp and channels connecting with the Desplaines River would be flowing over to the Chicago River to the

extent of the capacity of the trench that existed below this level. During the 20-year period referred to water would have flowed over the Chicago divide on an average of 73.2 days per year.

At all elevations when the water at Summit stood at 11.73 or above, corresponding to an elevation of 13.8 on the Riverside gauge, and to a volume of 1,052 second-feet, a boat drawing 15 inches of water could pass from the Desplaines River across the Mud Lake region and over the Continental or Chicago Divide and into the Chicago River without making any portage between them. Such condition would have prevailed during the 20-year period an average of 47.6 days per year.

At an elevation between 13.8 feet and 12 feet the water would gradually diminish in depth on the Chicago divide, and when a portage became first necessary it would be about one mile in length, and when it reached the level of 10.5 it would be two miles in length between the west fork at Western Avenue, Chicago, and the beginning of deep water in Mud Lake.

At an elevation between 13 feet and 12.4 feet on the Riverside gauge boats could no longer pass between Mud Lake and the Desplaines River, except light, and be entirely stopped, and a portage of one or two miles would be required between Mud Lake and the Desplaines River, in addition to the portage of two miles between the west fork and Mud Lake. In this condition there

would be a substantial navigable depth of 15 inches between Isle la Cache and Mount Joliet, a distance of 11 miles. Isle la Cache is located in the Desplaines River on the township line between the towns of Du Page and Lockport.

At an elevation between 12.4 feet and 11.85 feet on the Riverside gauge the Chicago divide would require the two portages mentioned, or the alternative of a 7-mile portage between the waters of the Chicago River and the Desplaines. The Desplaines would have a navigable depth of 12 to 15 inches, with possibly some deficiency in one or two localities; from Romeo down to the head of Lake Joliet there would be sufficient water for a boat at the higher stages to go down partially loaded and at the lower stages to go down light, but at the lower stages the cargo itself would require a transfer over the 11 miles from Isle la Cache to Mount Joliet. All the river below Lake Joliet would be navigated by discharging the cargo in part or wholly at Treats Island and near the mouth of the river.

There has been no time when the Desplaines River ran absolutely dry and there was not any water passing from pool to pool except as it was artificially produced by the abstraction of water from the Desplaines either for canal purposes during the time in which the Desplaines was used in that connection as a feeder or through the cutting down of the Chicago divide and the

drainage of the water towards Chicago at medium and low stages.

Changes in Desplaines River.—Various changes have been made in the Desplaines River from its condition as it existed in a state of nature. The portage swamp region lying east of the range line at Summit has been drained and made tributary to the Chicago River, except so much as is tributary to the canal, this area amounting to 48 square miles. There has been added from the Sag region an area of about 12 square miles, making the change below Lemont, 36 square miles to be deducted from the former areas. The deficiency of rainfall averaging 2.9 inches per year during the period of 20 years from 1887 to 1910, computed from the Riverside gauge, would produce a deficiency in run-off of probably 15 or 20 per cent, and the effect of that would be to diminish both the volume and duration for the stages of water exhibited in the table referred to. There is also a deficiency in the run-off due to the substantial clearing away of the forest-covered area of 5 per cent. There are changes which have affected the distribution of the run-off. The clearing away of the forests has destroyed an element of control which has diminished the control and the duration of the stages of water, and in addition the restriction of ponds and lakes and the drainage of wet lands, bogs, and marshes, and particularly the destruction of a special control existing in the portage swamp region and

12-mile level, all of which under natural conditions prolong the stages of water.

There have been radical changes in reference to the depletion of the water in the Desplaines River from a state of nature. The first change of significance was due to the construction of the Illinois and Michigan Canal in 1848. The effect of the construction of that canal upon the water in the lower Desplaines was a reduction of the drainage of the river below the dams at Joliet to less than 250 square miles out of a total of 1,428 square miles. Further interference arose from the fact that the location of the canal along the south and east side of the valley caused the hill drainage to be turned in part toward Chicago, and on the tangent between Summit and Bridgeport (in the southwestern part of Chicago) it ran across the south arm of Mud Lake, cutting off the drainage and reservoir control of that portion of the portage swamp region lying to the south of the canal. From 1866 to 1871 the Illinois and Michigan Canal was deepened, causing interference with the flow of the river. Further interference was caused by the construction of ditches in the Mud Lake region, and by the erection of pumping works at Bridgeport in 1883. Interference also occurred by reason of the construction of the river diversion by the Sanitary District in 1893-4, by which the Desplaines River was shifted to the west and north side of the

valley so as to leave a site between the river as thus changed and the Illinois and Michigan Canal for the construction of the drainage canal itself. Interference has also been caused by inhabitation which has cut away forests, thus curtailing the run-off, and there has been drainage of swamps and wet lands, and the destruction of ponds and lakes. The Sanitary and Ship Canal, which was completed in 1892, joins the Desplaines at Dam No. 1, 31.6 miles from Riverside, from which point its waters flow into and increase the current of the Desplaines.

These various changes have materially interfered with the flow of the river, and the conditions in the basin itself have been changed by the actual distribution of the flow. The Desplaines River has an impermeable soil bottom, and the control that was exercised was surface control largely. The destruction of this surface control has affected the flow of the water much more radically than would have been the case had the ground been permeable.

NAVIGATION OF THE DESPLAINES.

The United States District Court in its memorandum opinion found as follows with reference to this point:

United States claims among other uses actual navigation from early fur-trading days down to end of first quarter of last century.

Proof of actual specific use by customary mode of trade and travel by water—that is, by kind of craft then used for that purpose in rivers of United States—throughout this period appears. Controversy here has really been as to extent rather than the fact of such use. This evidence taken with existence of portage from Chicago River to Desplaines during time mentioned and large collection of historical documents, contemporaneous maps, and historical records and reports forbids conclusion river was not subjected to such use for trade and travel down to and subsequent to enactment of congressional legislation referred to. From this follows river shown by evidence to be navigable water of United States when bill filed and at present time. (R. 3236.)

The judgment of the court of appeals sustaining these findings by the district court can not be overturned unless shown to be clearly contrary to the weight of the evidence.

The Government feels that it has a right to rest upon these conclusions and this concurrence of opinion which is so amply supported by the evidence appearing in a somewhat condensed form in the 3,000 printed pages contained in the three volumes of Abstract of Proofs now before the court and the 50 or more maps also appearing in the record, but not otherwise reproduced.

Notwithstanding this, the Government believes that, as counsel for appellant have failed to review the evidence, it should, in view of the importance

of the case, give the court such aid as may come from a brief reference to the principal evidence introduced on both sides.

FORMER LITIGATION BETWEEN APPELLANT AND THE
STATE OF ILLINOIS.

Some years ago the State of Illinois brought, in its own courts, a suit against the appellant, in which it sought the same relief which the United States has obtained in this case. In that case, upon the evidence then submitted, the Supreme Court of Illinois held that the Desplaines River was not navigable and hence refused to enjoin the building of the dam (241 Ill. 290). The United States not being a party to that suit is, of course, in no way bound by the judgment. But the evidence in that case was materially different from that in this case. Some of the differences will be noted in the review of the evidence which we will now undertake.

GOVERNMENT'S EVIDENCE.

Professor Clarence W. Alvord, associate professor of history, University of Illinois, special editor publications Illinois State Historical Library, including bulletins entitled "Illinois in the Eighteenth Century," Volume II, Virginia Series, Volume I, Cahokia Records, Volume IV, Illinois Historical Collections, Subtitle Executive Series, Volume I, Governor's Letter Books, "The

French Archives of Illinois," the "Archives in the State Capitol," "The Genesis of the Proclamation of 1763," "The British Ministry and the Treaty of Fort Stanwix," "The Conquest of St. Joseph by the Spanish in 1780," "Capture of Vincennes by George Rogers Clarke in 1788" and other historical articles and papers, testified for the Government.

All of his courses for the doctor's degree have been in western history. His position had been that of a specialist in Illinois history since 1905. He had made a search of printed materials and had found a quantity in Illinois, in Canada, Boston, Albany, and Philadelphia bearing on early Illinois trade, including the fur trade. (R. 1-3.) Furs constituted one of the most important articles obtained by Europe from North America. One of the principal fur-bearing animals was the beaver, found abundantly around the rivers flowing into the lower part of Lake Michigan (p. 5). The three main periods in the history of the fur trade:

1. 1670 to 1763, largely by the French.
2. 1763 to 1812, by the British, coming down through Canada.
3. 1812 to 1834, aided by statutes, American Fur Company monopolized the trade (p. 6).

He cited numerous historical works, including one by F. J. Turner, which refers to the Chicago-Desplaines-Illinois route.

The American Fur Trade in the Far West, by H. M. Chittenden, in three volumes, who says that the fur trade was a leading branch of commerce in the Western World; that St. Louis was the principal, if not the only emporium, and communication with New York and other seaboard towns took place chiefly by the Ohio or the Great Lakes. "In the latter case the route was sometimes by way of the Illinois River to Lake Michigan." (*Reference to Chittenden not in the State case.*)

Refers to "Travels and Explorations of the Jesuit Missionaries in New France, 1610 to 1791," edited by Reuben Gold Thwaites, secretary of the Historical Society of Wisconsin, volume 59, containing a report by Father Marquette of the first voyage on the Mississippi made by a Frenchman, who said, "We therefore reascended the Mississippi, which gives us much trouble in breasting the current. It is true we leave it about the 38th degree to enter another river, which greatly shortens our road and takes us with but little effort to the Lake of the Illinois."

This trip was made *in the summer of 1673*; and Marquette continues, "In the spring and part of the summer there is only one portage of half a league." (R. 23.) Alvord explains that the Lake of the Illinois was Lake Michigan and the route was via Illinois-Desplaines-Chicago Rivers.

Attention is called to *Joliet's map*, dedicated to Frontenac, appearing as Exhibit 1, showing the *Chicago-Desplaines portage* and the *Chicago-Des-*

plaines-Illinois route. Alvord refers to French work by *Pierre Margry*, many years archivist in Department of Marine established by Colbert. It contains report to Frontenac, governor of New France, to Colbert, mentioning the opinion of Joliet, who accompanied Marquette, to the effect that "*by the route in question one would be able to go easily by ship to Florida by means of a very good waterway; that there would be only one canal to make, and that by cutting through one-half a league of prairie to enter from the lower part of the Lake of Illinois into the River St. Louis.*"

Witness then refers to record of trip by Marquette again in 1674. *He went in the spring and did not make any portage.*

In 1681 La Salle went up the river in search of Tonty. Margry gives the following account: "He [Tonty] ascended by this river without leaving any sign of his passage. In this he made a great mistake, which gave much trouble to Monsieur La Salle, as we shall see hereafter. He arrived *in a few days* at the Lake of the Illinois, on which he embarked, going from south to north along the western coast of this lake. He experienced incredible difficulties in this lake navigation, since he with all of his company was reduced to extremities from lack of provisions. At length he arrived, however, among the Pottawatomies, where he was compelled to pass the winter." (R. 29-30.)

Margry quotes La Salle's criticism of Joliet's project for a canal connecting the Illinois with

Lake Michigan on account of the difficulties of navigation. (R. 34-35.)

The witness gave it as his opinion that both Joliet and La Salle agreed on the possibility of using the Chicago-Desplaines route for commerce in smaller boats and canoes. Their disagreement was over the feasibility of a short canal and the usefulness of the route for larger boats. He says Joliet was one of the Jesuits who had a monopoly of the fur trade in the Lake region and desired the use of the route in connection with the Lakes. La Salle on the other hand was prejudiced against the Jesuits and had a patent which gave him the privilege of trading in the Illinois country, but forbade him to trade in the region which was already occupied by Canadian traders and from where furs were regularly carried to Montreal and Quebec. (R. 42.) In short, La Salle desired the trade to go down the river, and did not wish anything done to attract the traders from the north.

Government introduced a map by *Father Hennepin*, published in 1683, showing the *Chicago-Desplaines-Illinois route and the Chicago-Desplaines portage*.

Hennepin also wrote a description of the Illinois country, using La Salle's narrative freely. Although he prepared the map just noted, Alvord says he never used the Chicago-Desplaines route, his only trip being by St. Joseph-Kankakee port-

age. Joutel's journal of La Salle's last voyage, 1684-1687, shows that La Salle got a French fleet from the King to go up the Mississippi for the purpose of carrying out his idea of making the Mississippi a channel of trade. On the way he was murdered. Joutel became the leader of the party, which then sailed to the Illinois River, where they met Tonty; and the following March the party set out for Chicago, embarking on the river at Fort St. Louis March 21st, *and in spite of the difficulties occasioned by high water, arrived in Chicago March 29th.* (R. 44-45.)

Champigny, intendant of new France, wrote to Louis XIV from Quebec, October 13th, 1697, recalling that Tonty and La Forest have been permitted to keep Fort St. Louis on condition that they would not trade in beaver skins there and saying that they certainly would not stay there except to trade in beaver skins and they would do so at an immense profit; that they had established a *warehouse at Chicago and another at Michilimackinac.*

The witness says that this passage shows that *La Salle's successors* were exploiting the fur trade of the region and *necessarily using the Chicago-Desplaines River route* as a means of communication. (P. 46-48.) Early Voyages Up and Down the Mississippi, by Cavelier, St. Cosme, LeSueur, Gravier, and Guignas, by John Shea, an historian of the Roman Catholics in America, who was al-

lowed to examine the archives of the Roman Catholic bodies in Canada, gives an account of St. Cosme going down the Chicago-Desplaines route. He left Chicago October 29th, 1700, made a portage "which is three leagues when the water is low and only a quarter of a league in the spring" (p. 49).

Volume 65, Jesuit Relations, by Thwaites, contains a letter from Father Gravier which the witness says indicated he *used the Desplaines route September 8, 1700*. In Collections of the State Historical Society of Wisconsin, volume 16, there is a letter from two French officials in New France to the French minister urging the establishment of a post at Chicago "to facilitate access to the Illinois-Miami" Indians. A footnote by Professor Thwaites says, "*of the portage here mentioned that of Des Chesnes (the oak trees) was the one from the Chicago River to Desplaines, the earliest and best known route between Lake Michigan and the Mississippi.*" (Pp. 54-55.) (*The foregoing was not in the State case.*)

Chicago Antiquities, Comprising Original Items and Relations, Letters, Extracts, and Notes Pertaining to Early Chicago, Embellished with Views, Portraits, etc., by Henry H. Hulburt, contains a rough draft of a report by *James Logan*, bearing date December, 1718, designed to aid Governor Keith, of Pennsylvania, in preparing his memorial to the British Board of Trade. Logan, who came to America with William Penn on his second visit

as his secretary, filled many offices in the Province, including that of chief justice, president of the council, and governor. The report describes the passage from Lake Huron to Lake Michigan, thence 150 leagues to Fort Miami at Chicago, and continue "*up the River Chicago they sail but three leagues to a portage of a quarter of a league. They then enter a very small lake of about a mile and have another very small portage and again another of two miles to the River of Illinois, thence down the same 130 leagues to the Mississippi.*"

(NOTE.—It seems probable Logan did not personally visit Chicago, but report shows the general knowledge of and the well-known character of the route.) (*The foregoing was not in the State case and is not referred to in appellant's brief.*)

A quotation from *Charlevoix's Journal*, referring to a journey in 1721, says, "*I had two routes to chuse to go to the country of the Illinois. The first by returning to Lake Michigan and entering a little river at Chicago. After ascending five or six leagues up this river, there is a passage to that of the Illinois by two carrying places, the longest of which is not above a league and a quarter.*" (R. 58.) Charlevoix did not use the route, but statement shows it was a well-known route. (*The foregoing not in the State case.*)

"The Contest in America Between Great Britain and France with its Consequences and Importance. By an Impartial Hand. 1757." The author, John Mitchell, British physician, specialist

in botany and cartography, a man of learning and high reputation, says, with reference to the fur trade, "For this they have hitherto been obliged to go to a vast way aroundabout by way of the four Great Lakes and thence down the River Illinois into the Mississippi." *DuPratz* (1774), speaking of a river called the Illinois, says it was by this river that the first travelers came from Canada into the Mississippi. (R. 661.) *Choiseul*, prime minister of France, suggesting terms of peace, says the colonists who trade in peltries in the woods "betake themselves to the southern extremity of Lake Michigan, whence by means of a very short portage, which one calls the *Portage aux Chenes*, they descend by the river, the Illinois, into the Mississippi."

Letter was written to guide the French agents in negotiations and secure the retention of the exclusive navigation of Lake Michigan and a sure access to the Illinois trading posts. (R. 71.) (*Foregoing not in State case and not referred to in appellant's brief.*)

Work on topography in western country by *Thomas Hutchins*, published in London in 1778. Hutchins, captain in British Army in the French and Indian War, and a civil engineer employed by the Government to make maps of the West. Map used by later map makers as authority. Following passage appears: "*The Illinois River furnishes a communication with Lake Michigan by the Chi-*

cago River and by two portages between the latter and the Illinois River, the longest of which does not exceed four miles." (R. 72.)

Haldimand papers from Canadian archives at Ottawa. General Haldimand, British officer, governor of Florida and of Canada, 1760-1780. Historians regard the copies as authentic transcripts of the originals. Several passages quoted make references to the Desplaines route, showing it a well-known route and one frequently used for travel. One refers to the danger of Clarke attacking the British *by coming up the Illinois River to Chicago*. (R. 73-74.)

A letter from Lieutenant Governor Sinclair to a British colonel tells of *Canadian and Indian troops using the Illinois River route to go to the Mississippi and returning that way*. (R. 75-76.) Another letter from a British captain gives a plan of attack on the Illinois country by means of barges from Chicago "*where there is a portage of half a league in good weather; in this way we could come without difficulty to the Illinois.*" (*The Haldimand papers were not in the State case and not referred to in appellant's brief.*)

"Archives of aboriginal knowledge, containing all the original papers laid before Congress respecting the history, etc., of the Indian tribes of the United States," 1860, by *Henry R. Schoolcraft*, contains an account by Jean Baptiste Perreault, who in 1783 was apprenticed as a clerk to

Mr. W. Kay, of Montreal. May 16th, 1783, Monsieur Marchisseaux "directed me to assemble the men whom he had engaged in Montreal for the voyage." They went to LaChien, where the waters from the north delayed them to the 27th. They arrived at Mackinac with their two canoes June 28th, remaining there until July 15th. From thence they went to Green Bay, thence to Sauk Village at Hurkey River. "Monsieur Marchisseaux being necessitated to pass there instead of the direct route from Mackinac to St. Louis by way of the Illinois in order to collect his credit from the Indians * * * we left Cahokia on the 4th of May for Mackinac. Directions were to pass by Chicago, having one barge and one canoe etc." (R. 78-79.)

"Journal of a voyage made by Hugh Heward to the Illinois Country." Exact copy of original in Heward's own handwriting tells of a trip from Chicago to Cahokia by way of the Desplaines in the spring of 1790, shows it was taken in a pirogue. Manuscript describes journey from Detroit through the Great Lakes down to the southern end of Lake Michigan, then by Chicago, the Desplaines to the Illinois, thence down to Cahokia in the spring of 1790. The lake trip was apparently taken in bad weather. "May 11th, 1790, engaged five Indians to help us over the carrying place with the pirogue. Got over nearly at midnight. Passed in the run and small lake to the

River DePlain and course running southwest " (p. 82).

"The Life and Public Services of *Arthur St. Clair*," containing a report of the President in 1790 concerning water routes between Lake Michigan and the Mississippi, by St. Clair, then governor of the Northwest Territory, says: "*Much the greatest part of the merchandise for the trade of the Missouri River is brought from Michilimackinac by that of the Illinois*" and "the furs in which these goods are generally paid for are carried through Canada *by the same communication up the Illinois River to Chicago and thence by a small portage into Lake Michigan.*" It says that in the spring the waters rise so high "*that the intermediate space is overflowed and is passable by vessels in use there which are bark canoes, but which carry a very considerable burden and are navigated by three to five persons.*" (R. 87.)

General *Collet*, Frenchman, Governor of *Guadeloupe*, in connection with a trip through western America in the latter part of the eighteenth century reports that in high water boats carrying from fifteen thousand to twenty thousand weight can make the passage without portage by traversing a marsh where there is from four to five feet of water. (R. 88.) (*Not in State case and not listed by appellant.*)

Captain *Imlay*, United States Army, also commissioner for laying out lands in back settlements,

in "A Topographical Description of the Western Territory of North America," published in 1793 refers to the Desplaines Route and says it had "*portage of only two miles.*" (R. 89.)

Robert Dickinson, an Indian trader, wrote July 4th, 1793, mentioning the route by Chicago as one of two ways of communication between Mackinac and the Mississippi. (R. 90.)

Peace treaty negotiated by General Anthony Wayne with the Indians in 1795 stipulated that the United States was to have a free passage from "*the mouth of the Chicago to the portage between the river and the Illinois, and down the Illinois River to the Mississippi,*" (R. 91.) (*Last two references not in State case and not referred to by appellant.*)

Thomas Forsyth, an early fur trader, made memorandum of distances on the Chicago-Desplaines, Illinois, route in 1814 (R. 95) and in another letter mentions the route as a possible way by which the British and Indians might come down and attack the Americans (R. 97). (*Not referred to in State case or in appellant's brief.*)

Letter from Governor Cass to Secretary of War in 1815: "There are three great channels of communication by which traders may introduce goods in the Mississippi and Missouri country from the British dominions. One is by way of Chicago and down the Illinois." (R. 99.) (*Not in the State case and not referred to in appellant's brief.*)

John Kinzie wrote Governor Cass in 1815. Urges building of a military post at Chicago as a navigation of the Illinois and Fox Rivers "will in a few years become an object of great importance to the U. States as at present boats of several tons burden can pass from Lake Michigan into the Mississippi River." (R. 101.) (Not in State case and not in appellant's brief.)

Wm. Darby, famous United States surveyor, explored region 1818 and wrote "No doubt now remains but that the Chicago and Illinois Rivers afford by far the most natural eligible connection between the northern and southern waters of the United States." He refers particularly to the Chicago and Desplaines Rivers. (R. 105-106.) (Not in State case nor referred to in appellant's brief.)

Darby in a footnote printed an editorial from the St. Louis Enquirer by *Thomas A. Benton*, referring to Graham & Phillips, says that the commissioners will run two lines from the southwestern part of Lake Michigan to the Illinois River, embracing the little Rivers Chicago and the Plein at the carrying place between them, which form the channel of communication between Lake Michigan and the Illinois River. "*The French of Canada and of the valley of the Mississippi have communicated through this channel since the settlement of the countries. In high water boats of ten or a dozen tons pass without obstruction. In dry*



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season they are unloaded, placed on vehicles, and drawn by oxen over a portage of a few miles, and landed into the river or lake, as the course of portage may require. Hundreds, nay thousands of boats have been seen at St. Louis which have made a similar passage. (R. 106.) (Not in State case or appellant's brief.)

The report of Graham & Phillips to Secretary of War saying that in the spring "*boats of six or eight tons engaged in the Mackinaw-Mississippi trade run through backwards and forwards so as to make no portage between Mackinaw and the Mississippi.*" (Pp. 114, 115; see also 116.)

They also refer to the route as "the route by the Chicago, as followed by the French since the discovery of the Illinois," and say it "presents at one season of the year an uninterrupted water communication for boats of six and eight tons between the Mississippi and the Michigan Lake, etc."

"A Pedestrious Tour of Four Thousand Miles through the Western States and Territories during the Winter and Spring of 1818, by *Estwick Evans*, Concord, 1819," states, "There is a communication between the Illinois River & Lake Michigan by way of the Chicago River and two portages." (Not in the State case or referred to in appellant's brief.)

Gurdon S. Hubbard's Sketch of Life, 1802-86, arranged by a nephew, and a paper read by Hub-

bard himself give information as to use of the route by the American Fur Company.

A list of employees of American Fur Company, 1818, contains the following entry at page 162: "Engaged April 26, 1818. Hubbard, Gurdon S. Time, five years; capacity, clerk; where engaged, Montreal; wages, \$120; where employed, Illinois River. Remarks, Illinois River." (R., p. 118.) He tells of his engagement with the fur company, his journey to Mackinac Island, then having a population of 500, principally Canadian, French, and half breeds. "I was detailed to the *Illinois brigade of traders*, under the command of Antoine Des Champs, a highly educated gentleman, who had been more than 40 years an Indian trader on the Mississippi, Illinois, and Ohio Rivers. Our brigade of traders left Mackinac in September, coasting the eastern shore of Lake Michigan to Chicago; there we found Fort Dearborn garrisoned by United States troops. *John Kinzie* and *A. Ouilmett* were the only white inhabitants at that period in Chicago and northern Illinois." Nothing is here said (Abst. pp. 118-123) about the number of boats in the Illinois brigade, but it appears later from Hubbard's statement (R. 1511) that there were *at least 12*. In connection with Hubbard's return to the Illinois brigade, after his absence of a year and his departure from Mackinac Island (R. 400), he says: "In due course of time our brigade started, *the 12*

boats led by Mr. Des Champs and the old familiar boat song." They arrived in Chicago, where he joined Mr. Kinzie's family, "and remained there for several days *until the brigade again moved for the Illinois River.*"

The number of boats was insufficient to carry all the furs collected at the trading posts, as Hubbard tells us in connection with the winter of 1822 to 1823. "*We had accumulated more furs and peltries than our boats could carry up the Des-plaines River, and I was accordingly dispatched with four boat loads to Chicago. These I stored with Mr. John Crafts and returned to the brigade, when we all moved forward to our annual return to Mackinac. A portion of our furs were shipped from Chicago for the first time in a small schooner, which had brought supplies from the garrison. In 1819 the brigade consisted of 13 boats.*" (R. 1195.)

Hubbard's description of Mackinac Island in 1818 and the course of the fur trade carried on by the American Fur Company during his connection with it, including the description of the annual trips from Mackinac Island to the Illinois River via Lake Michigan and the Chicago-Des-plaines route, are enough in themselves to show that the method of trading had long been established when he joined the company. (R. 123.)

But, in addition, attention is here called to the ~~fact~~ fact that the American Fur Company, organized

in 1816, was a reorganization or combination of the Mackinac and Northwest Companies organized in about 1784, which apparently followed the General Store organized by a majority of Mackinac merchants in 1779 for mutual protection. These companies traded on the Illinois (R. 1671); and that the regular course of trade was by Lake Michigan and the Chicago route is evidenced by the statement of Hubbard relative to a house located on the Chicago River prior to 1778. "This tradition I received from Messrs. Antoine DesChamps and Antoine Beson, who from about 1778 had passed from Lake Michigan to the Illinois River yearly; they were old men when I first knew them in 1818." (R. 1667.) At that time (1818) Mr. DesChamps, superintendent of the Illinois trading post, had been an Indian trader on the Mississippi, Illinois, and Ohio Rivers for more than 40 years.

These methods continued up to 1825, when Mr. Des Champs, having grown old and worn by long-continued service, resigned his position as superintendent of the Illinois trading post of the American Fur Company, and on his recommendation Hubbard was appointed to succeed him. "I now determined to carry out a project *which I had long urged upon Mr. DesChamps, but without success.*

* * * The goods and furs I proposed to transport from the Indian hunting grounds on pack horses. In this manner the long, tedious, and diffi-

cult passage through Mud Lake into and down the Desplaines River would be avoided and the goods taken directly to the Indians at their hunting ground instead of having to be carried in packs on the backs of men. During the year 1822 I had established a direct path or trace from Iroquois post to Danville and now extending it south from Danville and north to Chicago, thus fully opening Hubbard's trail from Chicago to a point about 150 miles south of Danville." (R. 221.)

(We note here that Mr. DesChamps, with his many years experience still believed that the Chicago-Desplaines route was the best method of reaching the trading posts, although, as the testimony of the historians hereafter referred to will show, the hunting grounds had receded far from the Illinois River, and the quotation itself shows that the merchandise exchanged for the furs had to be carried from the river in packs on the backs of men.) There also appears a statement to a trip taken by Hubbard over the Chicago-Desplaines River route for the purpose of getting supplies.

Hubbard's account shows that in the fall in the dry weather the boats were unloaded and pushed through the ditch on short rollers. Four men only remained in a boat and pushed with poles while six or eight waded in the mud alongside and assisted in that manner. (R. 119.) This gives some indication of the number of men manning each

boat. (*No evidence in regard to Hubbard or the use of the river by the American Fur Company appeared in the State case.*)

The return journey appears to have been made in each case without any portage and sometimes with the use of sails. He says, "*In the spring following we returned by the same route. The rivers being full we had no portage to make passing the ditches and mud lake under full head.*" He refers to the trading posts on the Illinois River as being about 60 or 70 miles apart. (R. 123.) (See also 122.) Page 303, Hubbard says, "*I had before this been told by Mr. DesChamps that he made a trip every fall to St. Louis with one boat to purchase supplies and tobacco and other necessities for distribution among the various traders on the Illinois River.*"

One of appellant's witnesses also says that in the spring of 1825 Kinzie sent two men in a canoe from Chicago to Peoria. Hubbard, about the same time, went down in another canoe with one companion. They went on to St. Louis, got some goods, and delivered them to Chicago. (R. 1701.)

Henry R. Schoolcraft, historian, says that at the time he visited the Desplaines August 13th, 1821, the water varied in depth from one to two feet, but this was when rivers "are generally at their lowest stages." "*During the spring floods the Desplaines may be estimated to carry a depth of eight or ten feet of water to the junction of the Kankakee.*" (R. 126.) (*Not in the State case.*)

“Recollections of Wisconsin since 1820, by Col. *Ebenezer Child*,” a fur trader from the East, recounts a trip in 1821 to St. Louis returning from St. Louis “by the way of the Illinois River.” He could not find a portage, “as it was full of water.” (R. 127.) (*Foregoing not in the State case.*)

“*Ogden Letters*,” published in 1823, *George Ogden*, who went on a business trip to the western country in 1821, says “*The Plein is navigable within 2 miles of the Chicago River and boats are said to have passed loaded from one to the other at high water.*” (R. 128.)

Ordinance of 1878 fixed the northern boundary of Illinois at the line west from southern boundary of Lake Michigan. Pope, the Illinois delegate, got this changed so as to have a port on the lake which would tend to bring in the State northern settlers by the northern waterway.” This obviously refers to the Chicago-Desplaines. (R. 129.) (*Not in State case and not in appellant’s brief.*)

“A Gazetteer of the States of Illinois and Missouri * * * and a particular description of towns, river, etc., by *Lewis C. Beck*, A. M., member of the New York Historical Society and of the New York Lyceum of Natural History. Albany, 1823,” referring to the Desplaines River says, “The fact of an easy and during some seasons an *uninterrupted communication between Lake Michigan and the head waters of the Illinois was observed by the French at the first discovery of the*

country; and on this account they immediately erected trading establishments on different parts of the route. (R. 131.) * * * "The information of traders and voyagers was such as left no doubt of the existence of a natural canal between Lake Michigan and the Illinois at some seasons of the year. * * * Except in very dry seasons the portage was seldom more than 3 miles." (R. 131-132.)

Narrative of an expedition to the source of St. Peter's River, etc., 1823, by order of the Honorable J. C. Calhoun, Secretary of War under command of Stephen H. Long, compiled by William H. Keating, A. M., professor of minerology and chemistry, University of Pennsylvania, London, 1825, says, with reference to the Chicago-Desplaines, "*Having been informed that this route was frequently traveled * * * we determined to ascend the Chicago River (135). * * * Lieutenant Hopson, who accompanied us to the Desplaines, told us that he traveled it with ease in a boat loaded with lead and flour.*" (R. 136.) (Foregoing not in the State case.)

"Early Reminiscences of Wisconsin by John H. Fonda" describes a trip up the Desplaines with a party and an Indian guide to Chicago where they found Mr. Hubbard. (R. 137.) (Not in State case.)

"Drown's Record & Historical Review of Peoria, 1850," states that John Hamlin, "who is still

with us," was a clerk in the American Fur Company store at Peoria and while so engaged "*exported the first produce in Chicago in 1825 in keel boats as far as the mouth of Kankakee River, and from there in Durham boats to Chicago, having built a warehouse in the former place in which to store in from the keel boats, to be taken by the Durham boats up the Aux Plain River.*" The principal articles exported were pork, beans, and other provisions for the use of the fur company. (R. 139.) This incident is referred to by Judge McCulloch in "*Early Days of Peoria and Chicago.*" (R. 140.)

Report of Select Committee to Eighteenth Congress dated February 11th, 1825; repeated passages have been made "*by uninterrupted navigation from the river (Illinois) into the Lake.*" (R. 141.) (*Unable to locate this in State case.*)

"The American Gazetteer," collected and compiled by *Jedidiah Morse*, printed in 1797, under heading Illinois, "*The Illinois furnishes communication with Lake Michigan by the Chicago River between which and the Illinois are two portages, the length of which do not exceed four miles.*" (R. 143-144.) (*Not in the State case and not in appellant's brief.*)

"*The Navigator*," containing directions, etc., "for navigating the Ohio and Mississippi Rivers," published in Pittsburgh in 1824, says, "Between a branch of the Illinois and Chicago River which empties into Lake Michigan there is a portage of two miles; from this portage to the lake is a *bateau navigation of sixteen miles.* By this happy connection of waters there is a *complete communi-*

cation from New York to New Orleans, * * * the greatest stretch of inland navigation perhaps known in the world. This route is by * * * (here mentions the Great Lakes) *into the Chicago River mentioned above; thence down the Illinois and Mississippi Rivers.*" (R. 146-147.)

"Chicago Antiquities" contains a letter signed J. G. F. (Lieut. John G. Furman, U. S. A.), dated Fort Dearborn, 1830. "During the spring floods a considerable lake is formed, *the waters of which flow simultaneously through the Chicago, the Aur Plain, and the Illinois River into the great northern lakes and into the Mississippi.*" (R. 149.) (Not in State case and not referred to in appellant's brief.)

"The History and Geography of the Mississippi Valley, by *Timothy Flint, 1832*," author, who traveled extensively and reputed to be a keen observer, careful in statement, says with reference to the Chicago-Desplaines route, "We have already remarked that at *certain seasons of the year boats of 5 tons burden already passed through the morass from one extremity of which the waters are discharged into the Chicago of Lake Michigan; and from the other into the Plain of the Illinois; thus furnishing a natural communication between the two rivers.* (R. 152-153.) (Not in State case; not referred to in appellant's brief.)

"Narrative of an Expedition through the Upper Mississippi in 1832," by *Schoolcraft*, enumerating routes between the Mississippi and the

Lakes, first mentions "By the Illinois and Chicago Creek * * *. The routes *by the Illinois and by the Wisconsin* were first laid open by the French enterprise and have been used *by canoes and flat-bottom boats* in their natural state * * * *for about 160 years.*"

"A Winter in the West," published in 1835 by Charles F. Hoffman, lawyer and editor, considered reliable and accurate, says with reference to the Chicago-Desplaines Route, "*Boats of 18 tons have actually passed over the intervening prairie (the portage) at high water.*" (R. 156.) (*Not in State case and not referred to in appellant's brief.*)

The History of Will County, published in 1878, taken from histories of the country by Woodruff, Perrin, and Hill, says: "*As early as 1834 the products of the farm were boated down the Kankakee to the Desplaines, up the latter river to Chicago.* It is related that during the year named some parties loaded a boat on Sugar Creek, a tributary to the Iroquois, with 300 bushels of oats, 300 bushels of wheat, and some hams, with the design of taking them to Chicago to supply the garri-sons there. The trip down the Kankakee was accomplished without accident, but after entering the Desplaines near Treats Island, the boat dipped water and so dampened the grain that they were obliged to unload and try to dispose of their products at that point." (R. 159.) (*Not in the State case and not referred to in appellant's brief.*)

George W. Reed, a witness called in the State case, and then 84 years of age, apparently refers to the same incident and tells of his brother buying 5 or 6 bushels of wheat, which they spread out on sheets and quilts to dry. (R. 2103.)

"Illinois in 1837" refers to the Chicago-Desplaines Route as one "used by traders as a medium of communication between the Great Lakes and the Mississippi from the first discovery of the country by Europeans." Refers to the route as having been navigated by boats of some burden. (R. 162.) (Not in State case and not referred to in appellant's brief.)

"Narrative and Critical History of America, edited by Justin Winsor, librarian of Harvard University and corresponding secretary of the Harvard Massachusetts Historical Society, 1887." The book refers to the Chicago-Desplaines route as one of the three trade routes of the Mississippi and states that *this route appeared on the earliest maps of Marquette and Joliet and is displayed in the great 1684 map of Franquelin.* In "The Mississippi Basin," the same author says, "before the end of the seventeenth century the portages at the head of Lake Michigan had become the best known of all, and there had been a trading post for something like fifteen years at the Chicago River." (R. 166.)

"The Old Northwest," by B. A. Hinsdale, Ph. D., professor of science at the University of Michi-

gan, contains a reference to the Chicago-Illinois route. (R. 166-168.) Also in a volume of the American Nation Series, by Prof. Farrand. (R. 168.)

The "History of Wisconsin," by William R. Smith, regarded as one of the best local State histories, contains the reference to the *Chicago route* made by the United States Supreme Court in the Montello case.

Based on the foregoing authorities and on his own investigation, Professor Alvord testifies, "*My opinion is that from the latter part of the seventeenth century through the first third of the nineteenth century men engaged in the fur trade passed up and down the Chicago and Desplaines Rivers in canoes and flatboats very regularly. * * * That the most active trade carried on the two rivers falls between the period 1783 and 1825 or thereabouts; that the traders found a very easy passageway by means of these rivers in the early spring. That during the time of drought, such as occurred in the summer or fall, the passage was hard, but even then they forced their boats through the waterway, often being obliged, however, to carry their packages around the shoals and rapids.*"

"*I have not found any historian writing of the situation in the West competent to pass judgment upon material and who had investigated material that denies that the Chicago and Desplaines Rivers were so used.*"

Witness says "barque" was a boat of several tons, and when La Salle used the word witness concluded he was discussing a deep waterway from Lakes to Gulf (R. 189.)

Use of wagon road does not disprove utility of waterway. (R. 281.) Says La Hontan trip was "of the Dr. Cook variety." (R. 284.)

One would not expect to find a very large number of accounts of the actual use of the river situated far from civilization like the Desplaines was at the time it was used by the fur traders. The men who were using it were not given to the pursuit of literature. The majority of them were illiterate French Canadians, and many of the English were not educated men. The novelty of the travel over such a route had worn off, so that it would be surprising if there had been preserved many narratives by the men who had made the journey by themselves. To me it seems surprising that we have as many as we have preserved. (R. 299.)

Hubbard's book contains a passage in which author tells that while eating breakfast at Mr. Kinzie's home he heard men coming up the river singing and shouting. He went out and saw Governor Cass, of Michigan, and his secretary, Robert Forsyth, in a birch-bark canoe manned by thirteen men, twelve paddlers and a steersman, rapidly approaching, keeping time with their paddles to a Canadian boat song. Cass had gone to

Green Bay by appointment to hold a treaty with the Winnebago and Menominee Tribes. They did not appear. News of hostilities reaching the governor he procured the canoe and crew, started up the river, making portage into the Wisconsin, down it and the Mississippi to Jefferson Barracks, below it, and to St. Louis. Persuaded commanding officer to charter steamer, and embarking troops, ascended Mississippi in search of hostile Indians. *On reaching mouth of Illinois, governor with his men and canoe left steamer, ascended stream and Desplaines, passing through Mud Lake into South Branch of the Chicago, making the trip from Green Bay in 13 days, averaging 60 to 70 miles travel each day.* (Abst. p. 305.) (Not in State case and not referred to in appellant's brief.)

Professor Andrew C. McLaughlin, head of department of history of University of Chicago (*not a witness in the State case*), had been professor of American history, University of Michigan, since 1891; before that assistant professor of history, three years; also in charge of bureau of historical research, Carnegie Institute, Washington. Twelve years associate editor American Historical Review, four of those years managing editor. Gives other connections. Author of *Life of Lewis Cass* and other writings. Has made special studies of methods used by historians; studied books on historical methods and teaches historical methods; called upon as editor American Historical Review to examine critical articles

sent for publication, the object in view being to discover whether historical methods were used. (R. 312-313.) With reference to Charlevoix's statement, says that the *inevitable conclusion* is that the Chicago & Desplaines River was a *known route at the time*. Speaks of *Heward's Manuscript* as a *source of the highest quality*. Says *article in St. Louis Enquirer* about thousands of boats being seen at St. Louis which had made a Desplaines passage appears to him to be *very influential evidence*, and that a paper in a small place would *not be apt to print something known to the citizens to be untrue*. Regards Kinzie as a *source of the highest quality*. Has written the life of Governor Cass and knows he made the trip referred to. (R., 322.) Says *Schoolcraft's statement that Illinois route had been used 160 years means Chicago-Desplaines-Illinois route*. Has *high opinion of Schoolcraft and doubts if any early writer knew the West better*. Speaks of *Forsyth* as evidence of the *highest source*. (R. 323.)

Referring to *Major Long's report* to Secretary of War, "that the portage is seldom more than three miles long in the dry seasons; but in the wet season boats pass and repass with facility between the two rivers," witness says it was an *official report and writer had no reason to color it*. Says that *Graham & Philips's* statement that in the spring boats of six and eight tons engaged in the

Mackinaw-Mississippi trade pass back and forth without having to make portage between Mackinaw and the Mississippi "*is very strong evidence, reaching almost a proof, that this route was a well-established route of communication.*" He says he is speaking of the passage standing alone without considering any of the supporting evidence. (Abst. pp. 325-326.) Gives credence to statement in Drown's history that *John Hamlin conveyed produce from Peoria to Chicago in Durham boats.* (R. 326-327.)

Anything coming from *Flint* has weight. Flint a well-known student of western conditions traveling very widely and published very widely.

From 1721 to 1825 "*The Desplaines River was used with apparently considerable frequency as a route of trade and commerce,*" presenting difficulties at some seasons, other seasons used with considerable ease, and was "*a well-known means of communication between the Lake region and the lower Illinois and Mississippi.*" (R. 327.)

Says of *Alvord* that he ranks with Turner and Thwaites as *among the best known writers and investigators of western history* (R. 328). Attaches *great weight* to the editorial from the St. Louis Enquirer by Thomas A. Benton. (R. 348-49.)

Dr. Reuben Gold Thwaites (who was not a witness in the State case) (R. 363) twenty-four years secretary and superintendent Wisconsin State

Historical Society, states historical connections, lecturer on American history, University of Wisconsin. My special field being period of discovery, exploration, and settlement of the basins of the St. Lawrence, Great Lakes, and Mississippi River from the earliest discovery to 1850. Obligated to make study of source material; sought access to all possible material, personally investigating official archives in Canada, United States, and Paris, numerous works published, and connection with some fifty historical organizations. Says "barque" meant a small sailing vessel and that was what LaSalle had in mind in speaking of a canal. (R. 368.)

Miami Indians scattered through Wisconsin and northern Illinois, but in 1670 began to settle around the St. Joe River. Others settled near Chicago about 1700. (R. 371-3.) Had been in Chicago a long time in 1721 (R. 374).

Shea's translation of Charlevoix has high standing among historians. Charlevoix, a trained navigator, speaks of Marquette and Joliet going up the Illinois and Desplaines Rivers to Chicago (R. 375).

No doubt about location of Mission of Guardian Angel at Chicago. (R. 375.) Notation in index to Jesuit Relations mentioning mission as on the St. Joseph River an error of one of twenty assistants in preparing index, which had about 280,000 references. (R. 378.) Discredits Lahontan (R. 381-

382.) Reviews historical testimony. (R. 384-394.) Says *Darby's book* and extract from St. Louis Enquirer *excellent source material, showing Chicago, Illinois route a well-established trade route*. Enquirer's article, while probably somewhat exaggerated, is valuable testimony; the editor, *Thomas A. Benton*, a *leading, if not the leading, citizen* of St. Louis, well-known and learned man noted for studious habits and tenacious memory, friend of Chouteau and other French traders, could not very well make a misstatement to readers who were well informed in regard to the matter (R. 395).

Refers to Hubbard's life and early trips. Says he made other similar trips in following years 1820-1825 with as many as twelve boats at a time (R., 400-401). Says *Hubbard's Narrative* must be regarded as "*conclusive proof without reference to other sources that the Desplaines River was frequently used for a number of years by the American Fur Company between Lake Michigan and the Mississippi*" (R., 403). *Governor Cass's letter shows the Illinois route to be well known* (R. 403-404). Likewise the suggestion made by John Kinzie (R., 404-405). Says Schoolcraft's reference to the Desplaines entitled to great weight; it refers to the Desplaines as a well-known and established route (R. 406). *Forsyth also shows Desplaines to be a well-established route* (R., 407-408). *Major Long's account* telling of the three-mile portage at seasons would be considered by historians as *con-*

clusive proof of the use of the route; he was an expert sent for the very purpose concerning which he was reported (R. 408-409). Graham & Phillips report also official; Phillips a judge of Illinois Supreme Court.

Gives weight to Keating, official chronicler of Long's expedition, who shows that the *Desplaines River was used by the Federal Government for the transport of supplies* (R. 410). Childs made the trip over the Desplaines, and his writings considered a primary source; "*Illinois in 1837*" and *Beck's Gazetteer* acceptable contemporaneous evidence. Publishers of former had a good reputation to maintain as publishers of guide books (R., 411). *Flint considered very accurate*. Mentions route as already used by boats of five tons burden. (R. 412.) Hoffman's *Winter in the West*, a conscientious record, refers to boats of 18 tons burden having actually passed over the intervening prairie at high water. (R. 413.) Gives "*The Navigator*" high value and has personally tested its accuracy. The reference in it to route convinces him that it was an accepted avenue of trade and travel. (R. 413-414.) Drown's history of Peoria shows use of investigation.

"*My opinion is that from the latter part of the seventeenth century to the first third of the nineteenth century men engaged in the fur trade actually and quite regularly passed up and down the Chicago and Desplaines Rivers in canoes and*

batteaux, Mackinaw boats, and other boats propelled by oars or poles laden with merchandise and furs; that these traders and travelers found a comparatively easy passageway by means of these rivers in the early spring and sometimes at other seasons; that during times of drought, such as often occurred in the summer and fall on most of the western portage routes between the Great Lakes and the Mississippi (as, for instance, on the well-known and much used Fox-Wisconsin portage route) the passage was sometimes difficult, but even then these fur traders appear to have succeeded in forcing their boats over the Chicago-Desplaines waterway, although perhaps they were obliged here and there to make some carriage at that time of the year, the length of the carriage varying greatly from season to season and from year to year according to the stage of the water." (R. 415.) *High opinion of Alvord, and says McLaughlin is one of the best trained historians in the country. His judgment would have weight with every historian in the United States.* (R. 416.)

With reference to the testimony of old settlers, says, "*There is a well-known rule of historical evidence that one piece of positive evidence is worth any quantity of negative evidence.*" (R. 474.) *He would look with considerable doubt on statements of old settlers as to what they remembered of what occurred 77 years ago. Fact that wagons were frequently used to carry goods from*

Chicago does not in any way rebut statement that the Desplaines River was similarly used. Horses were used between the Fox and Wisconsin Rivers. (R. 475.) Says that *Graham & Philips report* was made in 1819 *at the lowest stage of water known in this country.* (R. 476.) With reference to settlers coming into Illinois by wagon, Thwaites suggested incoming settlers *might not have had canoes or batteaux with them.* (R. 487-488.) Refers to statement of Peter Pond, a famous fur trader, in speaking of the *Fox River in 1773.* "*It took the most of ye next day to get about three miles with our large canoes.*" (R. 489.) *The Fox River had a fall of about 170 feet in 28 miles.* Thwaites basing his statement on Schoolcraft, says, "*Northern canoes such as fur traders used were 35 feet long by 6 feet wide and capable of carrying 4 tons* (R. 497); *pirogues larger than canoes; batteaux larger than the pirogues; they were 30 feet long, 8 feet wide, flat bottom, pointed bow and stern; rowed with six oars.* *Mackinaw boats, 40 or 50 feet long, flat-bottom boats, 12 feet wide, and 3 or 4 feet deep.* (R. 498.) *Durham boats about 60 feet long, 8 feet wide, capacity about 15 tons, drew about 20 inches of water.*" (R. 499.)

Hubbard discontinued using Desplaines in transporting goods and furs, *not because river was impassable, but to reach Indians directly by horses instead of carrying them in a roundabout manner to subsidiary posts by boat and then to Indians on men's backs.* (R. 504.) Indians at that time

largely on the northern rivers of Illinois. He notes that later when Hubbard wished to go to St. Louis he used Desplaines route. (R. 505.)

Great majority of men travelling upon the fur trade or as military expeditions not in habit of making records. Many unlicensed fur traders would naturally avoid making records; Jesuit missionaries obliged to make reports, which were forwarded to Paris. Great mass of material in French archives probably to be unearthed within the next twenty years, now that historical work is better organized. (R. 510-12.)

William Kramer, engineering expert, states qualifications. Is a deputy United States surveyor and familiar with the laws governing their actions, river always meandered up to point where navigation stops. Identifies notes of John Walls as official notes of the meander of the Desplaines River commonly taken as the best—as the original survey of the Desplaines River. Surveyors run the meander along the stream noting different objects; notes show surveyor continued northeasterly direction along the south line of Desplaines until he came to the township line between towns 38 and 39, which he marked "*Head of Navigation.*" He then crossed river and meandered down stream along the other side. (Note that Kramer's Exhibit 1 shows that "Head of Navigation" corresponds with point of contact (and at times portage) between Portage Lake and Desplaines.) (R. 520.)

Lyman E. Cooley, whom the evidence shows to be a most distinguished civil engineer and for exceptional reasons particularly and accurately informed in regard to the Desplaines River, testified for the Government. (R. 550.) His study of the Desplaines began in 1875; he *established a gauge at Riverside in 1886* and kept a practically continuous record of the stage of the water from that time down to 1910, inclusive, to the time he testified. He made a topographical map of the basin and the minute and scientific study of the facts bearing on the sources from which the Desplaines was supplied, the character of the water course, and the causes which had resulted in a diminution of its natural flow. (R. 554.) The Desplaines River has "the appearance of an old water course or outlet from the Great Lakes in which the modern stream follows through remnants of an ancient stream of much greater magnitude, a succession of pools and wide expanses." Vegetable deposits indicate formerly a much greater depth now largely composed of numerous pools and connecting channels. His testimony and the other testimony in regard to the character of the river is summarized in the opinion of the court already quoted. He corroborates the historical testimony with reference to the stream's navigation and says that the physical conditions and topography "tend to show that the river was entirely competent for uses which have been related in regard to it." (604-605.) That the Mississippi and Missouri Rivers

have heavier currents than the Desplaines ever had. (607.) He also says, "From the physical standpoint it was entirely feasible to make such use as has been shown in the evidence of the historical experts. In fact, the physical conditions are better adapted to such use than any of the water trails that formerly existed between the Great Lakes and the waters of the Mississippi" (R. 612-613).

Data left from the past show that under natural conditions there was an uninterrupted navigation between the Chicago and Illinois Rivers for part of the year, during another portion portages from one to seven miles in length between the Chicago and Desplaines River, but after such portage boats could pass without interruption to the mouth of the Desplaines. (R. 113.)

He identifies various maps, profiles, references to a table of velocity prepared by the Deep Waterway Commission, and says that these are the maximum velocities, not the normal ones, yet even during extreme high water only the velocity at Joliet and at Marseilles is prohibitive. (R. 528.) Also, "A boat 8 feet wide, 32 feet long, with a depth of 30 inches sheer, 6 to 8 inches fore and aft—loaded draft of 20 inches and a block coefficient of 85 would displace about 11.3 tons." On a draft of 20 inches it would carry a cargo of 8 tons and a crew of six men with 900 pounds of supplies. It would carry a cargo of 5 tons on a draft of 15 inches. It would carry a cargo of $3\frac{1}{3}$

tons on a draft of 12 inches. (R. 634.) The shallowest point in the Desplaines during the low water line of 1883 was 15 inches. (R. 636.) No dams between Dam No. 1 and the mouth of the river. He explains the rule with reference to velocities and their relations to depth and slope. (R. 641.)

“ Desplaines to-day from Dam No. 1 to mouth is a navigable river for boats drawing $3\frac{1}{2}$ feet of water and up, depending on the stage of the water. With slight improvements as suggested $4\frac{1}{2}$ feet and up.” (R. 642.) Desplaines from Dam No. 1 in Joliet to mouth is “ the connecting link in a water route extending 3,300 miles from Gulf of Mexico to the Gulf of the St. Lawrence.” (R. 643.)

Desplaines River covered in 10 distinct surveys, reports, and projects, seven of which were official United States Government reports. The witness has read them all and says, “ these reports uniformly recommend the improvement of the Desplaines River as the most available route for a highway between the Great Lakes and Mississippi Rivers.” (R., 645.)

When gauge at Riverside read 13 feet there would be a minimum depth of 15 inches from Lockport to mouth, probably slight deficiency at Treat's Island and near the mouth.

Appellants solicited witness's services as expert engineer. Other parties offered him jobs as engineer in constructing dams over Desplaines and

Illinois Rivers, but he refused them all. (R. 790-1.)

Article introduced showing Rhone a steeper slope than the Desplaines. (R., 960.)

Table of certified gauge readings at Riverside introduced. (R. 961.)

G. A. M. Liljencrantz, assistant United States engineer, Chicago office, testified he has surveyed various rivers and harbors; read Government reports on improving Illinois, Desplaines, and Chicago Rivers, nine Government reports in all. (R. 648-650.) Especially examined same relative to matter of damages caused by proposed improvements; none contained any estimate of damages to riparian rights "if it was considered not a navigable stream, then there certainly would have been estimates," as engineer familiar with reports and procedure, would say that the engineers who made the nine reports already mentioned considered the Desplaines a navigable stream from Joliet to the north; examined reports for the special purpose of determining this point. (R. 652.)

Read from General Wilson's report, 1867; "it must be remembered that this river is not the exclusive property of those living upon its banks. It forms already an important link in a network of river navigation extending with its various branches through seventeen States in the Union." (R. 652.) Witness says reports of Worrall and Colonel McComb in 1875 agree that upper Illinois and enlarged canal from Joliet to Chicago

will afford the best route between Mississippi and Lake Michigan. Reports of Doran, 1875; Beneyard, 1882; Wisner, 1884; Comstock Board, 1887; Marshall, 1890, also agree on this point, and none contain estimates of damages to riparian owners; also the Ernst Board, 1905. Act of March 3rd, 1899, provided that estimates of costs for seven-foot channel from the upper Illinois to Lake Michigan be reported. (R. 667.) (No estimate of damages to riparian rights were included in the reports made pursuant to this act.)

D. H. Dugan, Sanitary District civil engineer, says 1901 low-water mark shown by gauge readings at Riverside, contained in House Report No. 263, was record low water. Gives depths of water at various places as shown by Sanitary District records. Minimum depth of river with augmented flow $3\frac{1}{2}$ feet at low stage of water (R. 890).

B. F. Thomas, Cincinnati engineer in charge of Kentucky, Muskingum, and Big Sandy Rivers, had done work for War Department specializing in movable dams. Had examined Desplaines and says in present condition it could be navigated by steamboats without cordelling at all points save Joliet.

Horace S. Brown's work consists largely in removing rocks from rivers for Government; has done work on Mississippi, Ohio, and other rivers (R. 849). Ohio in places had a minimum depth of 15 inches, which was improved to about $3\frac{1}{2}$ feet. Believes navigation of Desplaines from mouth to

Joliet is possible. Navigation could be greatly improved by removing boulders. (R. 857.)

Montgomery Meigs, United States civil engineer in charge of Des Moines Rapids, says Desplaines from mouth to Joliet navigable by steamboats at present. About half of the boats on the Mississippi draw less than $3\frac{1}{2}$ feet. (R. 882.)

Heilbron, civil engineer, took a trip on Desplaines from Joliet to Marseilles August 13, 1909, with the *Mississippi*, a steamboat about 35 feet long, 8 feet beam, inside draught about 15 to 18 inches, paddle wheel about 6 feet in diameter. Says Desplaines up to Joliet is a navigable stream. (R. 923.) Company operates two large boats and launch and several barges between Ottawa and lower Illinois on as little as 18 inches of water. (R. 925-927.) Witnesses Eidman, Clark, and Spencer took the trip with Heilbron. *Parry*, engineer, identifies certain maps and exhibits. (Pp. 544, 545, 964, 1026, 1028.)

Charles M. Coen, inventor of Coen's system of propulsion, which has been used in Miami and Erie Canal and around the Jersey City coast (R. 1000), states that in system described the propelling wheel, a screw wheel of the ordinary type, is located in a wheel chamber above the bottom of a boat as an extended dome so as to receive the full weight of atmospheric pressure from the outside on the wheel itself. That wheel chamber may be placed at any point in the bottom of the boat, allowing the bottom to be the lowest part.

Made a boat to float 100 bales of cotton for Fouch le Fevre, emptying into the Arkansas. Draft was 24 inches. Built boat on Yukon 110 feet long, 28 feet beam, draft 14 inches when loaded; house boat for Mississippi drawing $3\frac{1}{2}$ inches; has built eight boats for the Miami and Erie Canal drawing from 9 inches to three feet, according to load. (R. 1002.)

Desplaines can be navigated by shallow craft. (R. 1006-1008.) Could build a boat that would carry a 50-ton load up and down the Desplaines. Boat would be 24 by 78, draft when loaded 18 inches. (R. 1009.)

In addition, the Government used the following evidence which had been used by the State of Illinois in its case:

George W. Reed, 84 years old March 2nd, 1908. Settled in Will County 1829. Father began construction of a dam about November, 1832. In about 1833 remembers seeing party going down Desplaines River in flatboat, singing, etc. They said they were going to a warmer country. (R. 2102.) Remembers some wheat which had been shipped at a point below getting wet. His brother brought home five or six bushels, and they dried it on quilts and sheets. (R. 2103.) Other testimony in regard to river prior to 1848 has already been referred to.

General Alexander McKenzie, Chief of Engineers, United States Army, in service 44 years, knows Desplaines principally through reports

and records. Says Desplaines is officially regarded as navigable stream under the law. There are a number of rivers in the south whose upper waters have as little depth as two feet upon which business is transacted. (R. 2110.) Says that from reports judges that river is not to-day capable of profitable commerce in the way usually conducted at the present time, but has before him records which indicate that it was at one time navigated by a certain class of boats (R. 2113-2114). When he said at hearing before Secretary of War Taft that Desplaines was not navigable, he meant not being navigated. Did not refer to actual legal conditions. Secretary's finding an impromptu affair; statement in regard to non-navigability "based principally on the presentation made by Mr. Snapp and the fact that Secretary did not have to decide whether it was navigable or not. That was not part of the decision" (R. 2117). In deciding navigability, department not influenced by existence of dams put in without permission. There were dams in the Desplaines River but no permission for them.

A letter from Mr. Oliver, Acting Secretary of War, dated October 28th, 1907, to Illinois attorney general, stating that the War Department considered the Desplaines and the Illinois between Lockport and Utica navigable streams.

Theodore E. Burton, Member of Congress since 1895, and Chairman of Committee on Rivers and Harbors since 1898, testifies that some rivers are

profitably navigated on a draft of 20 inches or less. Enumerates some of them (R. 2128).

Hillebrand's Exhibit No. 1 introduced. (R. 2172.)

George B. Fox, paper manufacturer, transports products over the Miami and Erie Canal, operated mills since 1868. (R. 2188.) Uses the Coen boat system, carrying 50 to 60 tons of freight on a draft of $2\frac{1}{2}$ to 3 feet of water (R. 2189). Have 14 horsepower, are 18 feet length, 32 feet in breadth, built of iron and steel (R. 2191). These boats have caused the railroads to greatly reduce their rates (R. 2192).

Hegworth, an engineer in employ of the company, subpoenaed to bring the plans of the company, refused to do so on advice of counsel. Dam was to have been 18 to 22 feet high from the bottom of the river. He did some work on the dam before getting injunction. (R. 2196-7.)

Robert E. Orr testified with reference to Orr's Exhibit No. 1 and Exhibits 1 and 2. (R. 2203.)

Edgar Williams, civil engineer, associated with Mr. Cooley, testifies in regard to certain maps. (R. 2366-8.)

S. R. Van Sant, former governor of Minnesota, in transportation business on Mississippi River since 1857. Witness describes boats in use in his business having drafts of 14 inches, 18 inches, and up. (R. 2376.) On basis of hypothetical question, considers Desplaines navigable. (R. 2380.)

Wm. H. Zarley gives measurements of channel on each side of Treats Island. (R. 2386.) Numerous documents, including statutes, joint resolutions, engineering reports, estimates introduced in evidence. (R. 2393-2399.)

“*List of Merchants' Steamboats Navigating on the Mississippi*” shows four steamboats of 24 inches draft, having a tonnage of from 52.25 to 83.99 tons. (R. 2402-2407.)

APPELLANT'S EVIDENCE.

By consent the appellant introduced an abstract of a part of the evidence which it had used in its suit with the State of Illinois, as follows:

Depositions of Alexander, Williams, Meyers, Gurney, Munch, Boyne, Stevens, Adler, Burt, Layton, King, Comstock, Keene, Field, Bowers, Chamberlain, Hammond, O'Brien, Collins, McCowan, Killmer, related to recollections about early condition of Desplaines River and effect of such testimony has already been referred to. (R. 2485-2600.)

Robert Moore, consulting engineer, visited site of dam and estimates cost of riprapping banks of river. Says, judging from blue print, Desplaines was hardly a navigable stream in a commercial sense. (R. 2605-6.)

Bewley, steamboat captain, has navigated the Ohio on as little as 24 inches of water; a river which has a fall of 38 feet in 15½ miles, all of which occurred in stretches aggregating 6½ miles,

could not be navigated. (R. 2623.) Saw the Desplaines and thinks it is not navigable for useful purposes of commerce. (R. 2621.)

Pryor, steamboat pilot, does not think Desplaines a navigable stream. (R. 2629.) Gasoline not adapted to navigation of a rapid stream. Never saw or heard of a boat being operated on 16 or 18 inches of water, loaded or unloaded. (R. 2631.)

Mills, a farmer near Treats Island, used to own the island. Says only about five or six inches of water in river in summer. Remembers a fence in river up to 1871. Cross-examination made contract to sell to Mr. Munroe in 1904 and made transfer a few weeks ago. (R. 2642.)

Cornelius, Collins, Copelantz, Richards, Ellwood, all testified in regard to question of early navigation.

Whisler, steamboat man on Mississippi since 1865, saw Desplaines River twice and does not think it navigable.

McCaffrey, steamboat man since 1865, saw the Desplaines recently several times, does not think it navigable. Never navigated on two feet of water. (R. 2667-2668.)

Rambeau, McCullough, Doyle, and Mason, river steamboat pilots, have seen Desplaines and do not think it navigable.

L. L. Wheeler, civil engineer, thinks Desplaines was not navigable for commerce carried in boats.

(R. 2694). Is not familiar with the Desplaines since the drainage flow was turned in.

Snyder identified a map showing meander line of the lands of the canal. (R. 2719.)

Patrick Fogarty owned a quarry below Joliet. Says you could navigate the Desplaines in a boat drawing two or three feet of water from Patterson's Island to Treat's Island, but not below, except in a rowboat. (R. 2725.)

Brockway, president of Joliet, testifies as to low water in parts of the river. (R. 2731.)

Johnston, civil engineer, United States Engineer Corps, 1877-1886 employed by Economy Light & Power Company testifies in regard to gauge readings, slopes, etc. (R. 2739-2752.)

Munroe, Joliet real estate dealer, testifies in regard to low water. Does not think the river at present navigable.

Gray, engaged in steamboating, says Desplaines River not navigable for useful commerce. On cross-examination stated he carried 50 tons on steamboat with only two feet of water. (R. 2784.)

Counsel read from Parkman's La Salle and the Discovery of the Great West. (R. 2809.)

December 21st, Tonty, Membre, and party went from Fort Miami to Chicago and up a branch of Illinois (R. 2811). Letter from Father Membre tells of Desplaines being frozen in January and party dragged canoes over ice for 30 leagues. (R. 2815.)

Various acts of Congress, messages, reports introduced by defendant, abstract and brief in case of *Adam v. Druley*, opinion *State v. Economy Light & Power Company, etc.*

APPELLANT'S EVIDENCE TAKEN IN THIS CASE.

J. W. Woermann, civil engineer, had been employed by Government on Missouri River survey. Had charge Chicago River, 1896-97. Was in charge of construction work on appellant's plant. Investigated Desplaines; took gauge readings. (R. 1034.) Introduced copy of profile alleged to have been made in Wilson's survey, showing water around Treats Island as shallow as six inches. Table by Guthrie showing artificial additions to Desplaines from 1860-1867 through Bridgeport Canal pumps. Table showing rainfall, 1851-1895. (R. 1049.) On basis of Cooley's Riverside gauge figures, there would have been no water in Desplaines in natural condition in 1867. (R. 1050.) River little affected by deforestation or habitation. (R. 1052-1053.) Gives estimate and number of days in different years when Desplaines was seven-tenths of a foot deep or less. (R. 1057.) Made profile of Desplaines. (R. 1061.) Gives number of feet per mile of falls in certain parts (R. 1062) and gauge readings. Says that not over 9 days when the river at Riverside Bar was over $1\frac{7}{8}$ feet deep (R. 1063); no days in 1888; 50 in 1889, etc. Cooley's table of gauge readings has

little value on question of navigability. (R. 1065.) Does not show consecutive days. Ordinary conditions which would produce no discharge at Riverside would have same effect down the river. (R. 1069.)

Letter mentioning a gauge reading by Post and Paul and also by others showing Desplaines had slight flow in 1829. Other passages to same effect. (R. 1074.) Mostly Chicago sewage during dry season.

Attacks Cooley's accuracy. Says many statements referred to Desplaines not in a state of nature, but after proposed enlargement. Only feasible way to navigate Desplaines is to build a canal or dam. (R. 1080). Low-water discharge of Desplaines in 1883, 800 cubic feet per second. (R. 1081.) Flood conditions like 1892 only once in five or ten years. (R. 1086.) Introduces a map intended to show the streams and canals now used for purposes of transportation. Map does not contain Desplaines. Thinks Desplaines not navigable for purposes of useful commerce. Thinks Illinois River north of La Salle not navigable for useful purposes of commerce prior to 1900, "because of the dam at Marseilles, which was not provided with a lock and because of the steep rapids just below the dam and because of other shallow points above and below Marseilles." (R. 1089.) River navigable from La Salle to Ottawa. (R. 1088-1089.)

Cross-examination, Illinois River between Ottawa and La Salle navigated a year or two ago. "If there was a canal along the Marseilles Rapids, boats would go to the mouth of the Desplaines in low water with same facility that they reached La Salle before improvement of lower Illinois with increased flow from Sanitary District. Could probably navigate that part of river as easily as lower part of Illinois in its natural condition. By navigable stream I mean one which was or could be used for purpose of carrying on useful commerce in the way it is usually carried on. * * * If other conditions were favorable, river having more than a foot of water could be navigated for purpose of useful commerce. Not absolutely necessary that river should be absolutely free from snags and bowlders. If the river had a fall in it which is absolutely impossible to navigate, but had stretches above and below with sufficient water, whether or not I would consider that a navigable river because of that fall would depend upon the proportion of unnavigable fall or rapids as compared with portions navigable * * *. Recall no official documents describing Desplaines between Dam No. 1 and mouth as a nonnavigable river, nor do I recall any which calls it a navigable river." (R. 2074-2075.)

Introduces report of hearing before Taft already referred to. (R. 1937.) Introduced table of gauge readings purporting to show number of days when there was no discharge and number

when there was six inches depth or less. (R. 1939-1947.) Witness now an assistant to divisional engineer, United States Army, receiving \$300 a month. Employed on the Missouri River 1890-91. Worked on Hennepin Canal and helped dredge Chicago River 1896. Worked on Illinois-Michigan Canal 1897. Constantly employed by Government from 1891 to 1902 under district engineer. (R. 1954.) 1902-1905 worked under the Ernst Board on project for 14-foot waterway from Chicago to Mississippi. Had access to sanitary district data. (R. 1955.) Private practice 1905-1908; expert witness in number of lawsuits against sanitary board. Was first employed by Economy Light & Power Company in January or February, 1908. Took charge construction work July, 1908, but was employed by its chief engineer July, 1907. Received \$200 a month. (Colonel Bixby's letter March 27th, 1906 (R. 2871), shows that witness was then in Munroe's employ, and if distinction is made between Munroe and appellant, report of Taft hearing February 3rd, 1907, shows Woermann present among others representing appellant.)

Witness believes case of *People v. Economy Company* begun December 30th, 1907. At that time earth portion of dam at north end had been erected. Only portion extending into river was cofferdam which extended into river at upstream corner probably 150 feet. About 150 feet from river bank. At the cofferdam river was 250 to 300

feet wide in low water, 2,000 feet in high water. Construction on dam begun on right bank. Witness is receiving \$300 a month as a Government engineer; has received about \$800 or \$1,000 as an expert in this case for appellant. (R. 1961.)

Discusses various dams, bridges, etc., which were or had been obstructions to navigation in the Desplaines. (R. 1969-1974.) In 1904 at Jefferson Bridge discharge had volume of 22,000 cubic feet per second and current of $7 \frac{4}{10}$ miles per hour (R. 1965.) Shallowest parts of Desplaines at mouth and Treats Island. (R. 1965.) No particular difficulty for a skiff at either point. In July, 1889, witness went down the Desplaines from Adam's Dam to La Salle in a skiff. In 1904 went from Joliet to La Salle in a skiff. The boat was always in the water. Passed Treats Island and through the channel at mouth of river. Don't think they struck bottom anywhere. Kept sharp outlook to keep boat from turning over in swift water; was in the spring. (R. 1968.) Witness describes Jefferson Street Bridge, Rock Island, railroad bridge, Dam No. 1, and certain other past and present obstructions to river. (R. 1980-1983.)

Witness says slope of Desplaines at mouth as shown by profile 1867, one foot per thousand. Average depth across stream $\frac{3}{10}$ foot and about $\frac{4}{10}$ foot in the deepest part. (R. 1985.) Average velocity would be about $\frac{4}{10}$ of a foot per second. Discharge on 180-foot width, which was the narrowest point in 1867, would be about 21

feet per second. Treat's Island depth of 8/10 of a foot in left-hand channel. In the rapids below Joliet, the shallowest point is 5/10 or 6/10 of a foot. (R. 1986.) Admits Wilson's profiles 1867 not extremely accurate, as measurements of slopes were not taken near enough together. (R. 2009.)

Counsel for Government read extracts from report of 1867 to show that survey was taken when waters in Desplaines and Illinois were extremely low (2010-2011).

Witness says, based on Johnston's table prepared for appellant, a gauge reading of 12 1/10 feet would give a volume of 116 second-feet, and at 11 4/10 feet there would be no water going over the bar at Riverside. Rainfall in 1867, 22 inches, whereas average from 1843 to 1910 was about 33 inches. (R. 2012.) Average dry river flow on Desplaines from Riverside was 13 second-feet; only 50 second-feet after waters of Dupage were added and 650 second-feet after Illinois and Michigan Canal sewerage waters were added (2014). Thinks deforestation had little effect on Desplaines. Counsel for Government reads extract of Professor Bain, University of Illinois, to contrary effect (2015). Also from Wilson and Gooding's report of 1868 (2016). Witness says reputation of Wilson and Gooding among engineers is good. Newspaper editorials of 1889 as to proposal to give water power to riparian owners as the price of their consent read into the record by counsel for appellant (2020-2021).

Witness intimates flow of Desplaines increased by inhabitants' use of artesian wells. (R. 2024-2025.) In regard to readings at Riverside gauge, witness took April 1st to December 1st as period of navigation. Admits ice generally goes out about March 1st. Some years in the latter part of February and March there is little or no ice. Supposes Illinois and Michigan Canal used after December 1st when there is no ice (2027).

Reads extract from Cooley giving low-water volume at 256 feet per minute in 1887 and 339 feet per minute in 1879. (R. 2031.) Also quotes Cooley as saying during large part of year Illinois River shallow, sluggish at times, stagnant, unhealthy, and unfit for profitable navigation (2033). Woermann says average flow of Jackson Creek 610 feet per second (2034). Flow at mouth of Desplaines would be 810 second-feet, assuming a drainage area of 1,026 square miles to and including Jackson Creek. Soundings of river around Treats Island were given on Marshall's map, depths from 1 to 3 feet. (R. 2038.) Editorial Daily News, December, 1888, states that village towns had a right to abate nuisance created by sending sewage down proposed canal.

Witness cross-examined on accuracy of his profile from Lockport to mouth, which he said was copied from Seddon's profile, whereas the latter only went to Joliet. Counsel for Government points out that navigable waterway from Chicago would be by drainage and ship canal to Joliet and

then down Desplaines to Illinois. (R. 2041-2042.) Woermann prefers Johnson's tables of Riverside gauge readings rather than discharge curve of Sanitary District, because he states latter was prejudiced against appellant. (R. 2046.) Woermann says fall between Romeo and Lake Joliet is 77 feet in 11 miles, and depth would be about 15 inches when gauge at Riverside was $13\frac{1}{10}$ feet and flow there was 550 second-feet. Flow at mouth of Desplaines would be more (2047).

The difference between Prof. Cooley's table of gauge readings and the witnesses is that the latter omitted from December 1 to April 1 and Prof. Cooley included the whole year.

Usual depth of boats on western rivers $3\frac{1}{2}$ to $4\frac{1}{2}$ feet. (R. 2052.) Usual low-water period on Illinois 60 to 90 days, according to Wilson & Gooding's report, 1887. Woermann states period has been as long as 150 days. (R. 2052-2053.)

Ohio and Mississippi Rivers also have low-water periods, but navigation not interrupted to the same extent. (R. 2053.)

"As I stated a few moments ago, all of the Western rivers have periods of low water as compared with an average or flood flow; and I am also willing to admit that useful commerce may be entirely interrupted for two or three months in the fall, September, October, and November; and if the stream was navigable during the months of April, May, June, July, and August I would not say that it was not navigable because it was inter-

rupted for three months in the late summer or early fall." (R. 2054.) If it were also interrupted in May, June, July, and August, would not consider it navigable stream. (R. 2054.) Witness apparently assuming no navigation between December 1 and April 1.

Witness says 1867 profile represents usual low water flow in state of nature. Said Wilson and assistants made thorough soundings. (R. 2058.) Counsel for Government criticizes profile for showing fall of two feet in Lake Du Page. Witness thinks that a mistake of draftsman. (R. 2060.)

Witness quotes Cooley as stating low water volume at Riverside 1887, 4.27 second-feet. (R. 2063.) Witness says profiles of Marshall, Seddon, and Cooley practically the same. (R. 2072-2073.) Charter requires Sanitary District to turn in 20,000 cubic feet per minute for each 100,000 people or 400,000 cubic feet. (R. 2074.) Illinois River between Ottawa and La Salle navigable. A canal along Marseilles Rapids would extend navigability to mouth of Desplaines in low water without addition of flow from Sanitary Canal. (R. 2075.) Government introduced table showing average number of days between 1847 and 1896 when ice at Chicago made it necessary to close the river to navigation. Average number was 51. Mr. Woermann omitted December 1 to April 1, or 121 days, from gauge readings. (R. 2077.)

Woermann quotes extract from Moore, of United States Weather Bureau, to show deforesta-

tion has little or no effect on streams (R. 2080-2081). Aside from Army officers, only one assistant engineer receives more than he does, and only 12 get as much as \$300 a month (R. 2086). Introduces table of average monthly rainfall near Peoria. (R. 2087.) Similar table for region above Riverside.

Appellant's historical expert, Judson F. Lee, 30 years old, specializing in history, teaching in Lewis Institute for about two years has studied history of Illinois and early transportation problems, wrote thesis on this point. (R. 1091.) Has investigated influence of rivers on population (R. 1093). Early settlements were along rivers in Middle West. Settlers traveling down Ohio (R. 1095), Tennessee, and Mississippi Rivers. Early settlers in Illinois needed a market so urged inland improvements. Reads article from Pooley, Wisconsin University student, and extract from book by Ellen Semple to support the conclusions. Referred to history of Illinois by Governor Ford, which mentions various rivers along which people settled, but did not mention Desplaines. Other works read to show early settlers used rivers.

Extract from Turner's American History states early settlers' camp along rivers and timber lands. Says, when possible, settlers came by way of rivers. (R. 1108.) No instance where Desplaines was so used. Read from Hubbard to show Chicago only small village in 1818, and northern Illinois almost without population. Schoolcraft tells of trip

from Peoria to Chicago without finding a single house between. (R. 1112.) Article by Edwin Gale, early Chicago settler, states there were few white people in Illinois up to 1830. (R. 1113.) Ford's History of Illinois says a few small steamboats went up the Illinois as far as Peoria, sometimes farther. (R. 1115.) Little trading done.

Other articles to show Chicago's growth did not begin until 1830-1840. Exports from Chicago in 1840, \$228,635. (P. 1119.) Commerce came to Chicago from interior by wagon (R. 1122) not by Desplaines. Reads from Chicago Weekly American, of 1842, to show that numberless wheat wagons came to town every day (R. 1123) from as far as 200 miles away. Reads extract from advertisement May 7, 1836, of wagon transportation from Chicago to Illinois River. (R. 1127.) Account by Woodruff, author of History of Will County, says that before opening of canal goods were transported from Chicago chiefly by ox teams and mail carried by stagecoach. Report of Canal Commissioners, 1825, says Desplaines is unnavigable in low stage of water (R. 1136), and urges that a canal be built.

Bucklin, engineer for Illinois-Michigan Canal, some time in 1818-1834 recommended the use of reservoirs to supply the canal. Articles in Chicago Tribune, Chicago Democrat, showing increase in trade after opening of canal. (R. 1140.) Stage coach from Chicago to Ottawa mentioned several times in different accounts. (R. 1143.)

Peoria Register, 1837, mentions fact that water communication between Illinois River could be opened by means of a canal. (R. 1148.) Ads. of transportation company carrying to and from Chicago by stage introduced. (R. 1149.)

History of Grundy County mentions use of Indian trails to Chicago. (R. 1153.) In 1834 road laid out following Indian trail. (R. 1155.) History of La Salle County shows fall of price of lumber, wheat, etc., as result of canal transportation. (R. 1158.)

Witness studied under Professors McLaughlin and Merriam, University of Chicago, the art of criticizing historical sources. (R. 1159-1160.) Criticizes Keating's account of early trip. Compares it with Schoolcraft's account. (R. 1160-1162.) Introduces extract from statement by United States engineer to support Schoolcraft. (R. 1165.) Says Keating's statement as to Desplaines based on hasty examination when river was high. Says Child's account based on high-water conditions. (R. 1166.) Says Morse Gazetteer statement that Desplaines was navigable stream was based on Hutchins. (R. 1168-1169.) Criticizes statement in Woodruff's History of Will County that steamers plied up to Chicago. Says nothing else to corroborate this. (R. 1170.) Hutchins never in Illinois (R. 1171), but based statements on Kennedy, who never got higher than mouth of Desplaines. (R. 1173.)

Says Darby never saw Desplaines. (R. 1174.) Says Darby's report was based on an editorial in the St. Louis Enquirer, the writer of which had for years advocated a lake to gulf deep waterway. (R. 1175.) Quotes several authorities to show small population in Illinois with no need of traffic mentioned in editorial. (R. 1179-1181.) Extract to show little lake commerce as early as 1840. (R. 1183.) Extract from Maj. Long showing necessity of a canal. (R. 1184.) He suggested Desplaines needed but little improvement to give canal service. Criticizes Alvord's translation of Charlevoix. Omitted the statement that "as the Desplaines is but a brook in this place, I was informed that at that time of the year I should not find water enough for my canoe."

Quotes Schoolcraft as saying Desplaines was so shallow that his party had to finish their trip on horseback; thought that a canal of 8 or 10 miles, while it would continue at all seasons, the connection which already exists between Chicago and Desplaines River would fall far short "of the grand purpose." Witness criticizes Imlay and says he relied on Hutchins's observations. (R. 1195.) Examines accounts of Gurdon Hubbard, who made several trips on Desplaines; mentions difficulties in making passage with loaded boats. (R. 1179.) Says while Maj. Long's statement as to navigability of the Desplaines would have considerable weight on account of his official position,

they should not take precedence of the evidence of the men who used the route. (R. 1200.) Does not say that he did not use the river, but says there was no evidence that he did has come to his attention.

Discusses Graham & Philips report and emphasizes the wagon road used in dry seasons. The witness thinks it was due to incoming settlers rather than to traffic to and from Lake Michigan. Northern Illinois not yet settled. Discusses Governor Cass's trip and says Cass took it not because it was well known but says because he wanted to notify the frontier posts. (R. 1203.) Gives opinion on various trips taken on the Desplaines, which were mentioned by Government witnesses. (R. 1204, etc.) Eleven men took such trips and wrote about them. Also mentions those who went over the route, but did not use them. Opinion is that men did not engage in trade on the Chicago and Desplaines Rivers as a regular thing between 1783 and 1825 (R. 1206) and that Desplaines in the natural state was not navigable for purposes of useful commerce. Head of navigation always referred to as on the Illinois (R. 1207) (says later newspaper advertisements referring to "head of navigation" as being the upper Illinois River probably meant the head of steamboat navigation). (R. 1318.)

On cross-examination witness says McLaughlin has good standing among historians; as a critic of historical material is one of the best in the country.

Conclusion subject to same criticism as anyone else's if not accurate. *Dr. Thwaites has always had a good standing.* Cross-examination brings out Lee's work as teacher more along the line of political science and economics than of history. (R. 1211.) Never taught history of Northwest Territory. Says when two historians disagree you should go by the one who prepared most thoroughly. (R. 1214.) No legal training. Does not know what would be legal evidence. Says McLaughlin took a law course at Michigan. (R. 1215.) Thinks Thwaites and Alvord may be careful critics, but is not sure. *Admits that million of events happen where only a few affirmative records of the event will appear.* (R. 1219.)

Has met Ellen Semple (whom he quoted above) and says her work on American history is considered to be very carefully written; Government then had witness read an extract from her book mentioning the use of the Chicago-Desplaines-Illinois route by early fur traders. (R. 1222.) Lee had not noticed this nor a map in her book showing the Chicago-Desplaines portage. (R. 1223.) Other extracts from her work were read showing early commerce over this route.

Asserts St. Louis editorial mentioning thousands of boats coming down the St. Louis is incorrect. (R. 1229.) Did not investigate work of different fur companies or make any special examination with reference to early fur traders. Says fact that early settlers did not come in by

Desplaines is strong though not conclusive evidence against its navigability. Says fact that there was not a good harbor or transportation facilities between Chicago and east was a good reason for the paucity of settlement in Desplaines region. (R. 1243.)

Counsel for Government had witness read a passage from Hulbert showing Desplaines-Illinois was a favorite route; also similar reference in Schoolcraft (R. 1245), although he had earlier mentioned taking a 30-mile portage in summer. Counsel explains this long portage by showing (R. 1247) that in 1849, for example, Ohio River was too low for transportation in the fall and Schoolcraft's journey might have been in a dry season. He mentioned (R. 1249) that it was a sultry season, being August, 1821. Keating made similar statement concerning 30-mile portage in very dry seasons and witness had criticized Keating's reliability. (R. 1253.) Witness knows of Professor Bourne, of Yale. Would give great weight to his word. Latter had high opinion of Keating. (R. 1254.) Witness had not read all of Pooley's thesis nor examined it carefully. (R. 1255.) Same is true in regard to Ford's History of Illinois. (R. 1258.) Also indirectly admits that neither extract tends to show whether upper Illinois and Desplaines were navigable or not. (R. 1259.) Had not read thoroughly works of Benton, Ford, McCarthy, and other authors from whom he quoted (R. 1261) and had not in-

vestigated their authenticity. He used Turner's New West as reference book. Said it had a reputation for accuracy, but he did not test it. (R. 1265.) Has read DuPratz, but has not examined him critically. Says Carter's Illinois Country is a reliable work. Carter in his preface expresses gratitude to Professor Alvord for his assistance, and mentions the latter's intimate knowledge of the field. (R. 1267.)

Witness thinks Keating inaccurate, as he said Chicago had poor soil and corn would not ripen. (R. 1270.) Greater weight to Schoolcraft than to Keating. (R. 1271.) Featherstonehaugh, an early writer, also criticized Keating, and witness gave considerable weight to his statement without examining passages in Keating very closely, but maintains Keating was a careless observer. (R. 1279.) On question of whether name of Indian tribe was Dacotah or Nacotah, several historians agreed with Keating, none with Featherstonehaugh. (R. 1281.) Counsel for Government had witness read from Major Long's report supporting Keating's statement that it was difficult to raise corn on Chicago soil. (R. 1297.) Witness admits that he does not know anything about the question of raising corn on Chicago soil in the forepart of the nineteenth century, or whether corn or maize was meant.

Witness not now sure Hutchins based statements on Kennedy. Admits Hutchins was at present site of St. Louis in 1776. (R. 1299.) Made

no investigation to find out who Kennedy was. Did not know whether he ever saw Hutchins after he made his journey in 1773. (R. 1302.) Made no exhaustive study of Darby (R. 1310), who gave great weight to St. Louis Enquirer editorial.

There was some early fur trade from Canada through Chicago. (R. 1313.) Heward, Perrault, and Hubbard used the Desplaines route. Relies on statement of Graham and Philips that "during half a year Desplaines does not contain enough water to float a boat." Says Hubbard did not "navigate" Desplaines, because he had to put his boat on rollers. (R. 1316.)

Did not have in mind when he drew his conclusion as to navigability of Desplaines the report of the select committee of the House of Representatives which stated that repeated and uninterrupted passages had been made from the river into the lake. Government had witness read from Smith's Life and Times of Louis Cass, an account of Cass's trip up the Desplaines with eighteen men in a canoe in July, 1827, in which the author refers to the fact that boats pass from the Desplaines into the Chicago to Mud Lake. (R. 1321-1323.)

Witness remembers no affirmative statement that Desplaines was not used by boats similar to those on the Fox, Wisconsin, prior to the use of steamboats. (R. 1323.) Says Charlevoix did not use Desplaines. (R. 1324.) Gives greater weight to Charlevoix than to Darby or Keating, although

he has not checked up Charlevoix carefully (R. 1325), and Charlevoix did not pass over the route, but his testimony has as much weight as if he had (R. 1327). Recalls Hubbard had a hard time going down the Desplaines and made a trip up the Desplaines, but witness did not remember so much about that trip. Says Desplaines in natural condition was not navigable for use of commerce. Knows little about the natural condition of the river. (R. 1330-1331.) Would call the fur trade useful commerce. Gives his reasons for thinking the Desplaines not navigable. Upper Illinois known as head of navigation; then considerable talk of building canal. Says no evidence that Desplaines was ever used for purposes of useful commerce regularly. (R. 1339.) Perrault, Howard, and Hubbard were the only three who used it for commerce.

Redirect examination: Wrote his thesis before he worked for the company. Read several extracts showing settlers were going to southern Illinois by the Wabash River in early part of nineteenth century. (R. 1342.) Most products from Illinois shipped down to New Orleans or St. Louis. Carter's Essay says French were responsible for England's failure to develop trade in Illinois Country. After cession of lands to England (R. 1345) goods chiefly went to New Orleans, a Spanish port. (R. 1353.) Says early map in Pooley's book showed as late as 1830 settlers following rivers, but had not got farther up the Illi-

nois River than Lewiston. They did not get farther up the Mississippi River than Quincy. (R. 1354.)

Says when Schoolcraft spoke of "the grand purpose" did not necessarily have in mind large boats. (R. 1355.) Extract from St. Cosme to effect that there was no water in Desplaines except in the spring. (R. 1360.) Says LaSalle made similar statement. Quotes from Turner to show settlers came along river when possible and most commerce from Illinois passed down Mississippi. (R. 1366.) Says Major Long inaccurate observer when he said ripples and rapids in Desplaines appeared only in low water, while at mouth of Vermillion there were formidable rapids. (R. 1369.) Says Hutchins lived in Illinois about 1770-71.

Counsel for Government had witness read quotation from Governor Gage, used by Carter. Mentioned Canadians as using northern routes for trade. Witness says Gage meant only trade of the far upper Mississippi. (R. 1380.) Also had witness read extract from Illinois Historical Collections, volume 2, saying great majority of residents in Cahokia and other Illinois towns came from Canada and continued to engage in trade in Illinois. (R. 1387.) Admitted Heward visited Cahokia in 1790.

Counsel for Government had witness read written authority to trade with savages in Cahokia in 1782, given to one Jean La Croix. (R. 1393.) Also

had witness read letter from Thomas Bentley in 1780. Bentley an early fur trader at Montreal. (R. 1395.) Also a memorial dated December 8th, 1784, from Francois Carbonneaux, of the Illinois country, "agent for the inhabitants thereof," speaking for "the inhabitants to the number of 400 families, exclusive of a like number at Post Vincent," and asking the United States Government to establish a valuable commerce which is now wholly carried on by British subjects from Canada. Also a letter from Joseph Parker to President St. Clair, dated October 2, 1787, complaining that traders from Michilimackinac and Detroit engross all the fur trade. "The traders in St. Louis and St. Genevieve on the other side of the Mississippi have not less than 100 traders who are supplied with goods annually from Michilimackinac and Detroit and sent down to Kaskaskia and Cahokia and the Spaniards come over and purchase them. Each trader purchases on an average from 30 to 40 thousand livres annually, which is \$6,000." Also has witness read petition of Pierre Langois, of Kaskaskia County, of Illinois, 1786. Refers to a company "of the subjects of Great Britain" operating from Michilimackinac, who were getting possession of the commerce and have established at Cahokia, a trading post. Witness says that from this and other statements referred to in the evidence "should think there was an indication that there was some little commerce from the period 1782 to about 1817 that went by

way of St. Louis to Cahokia, Kaskaskia, and Canada; does not know how much. (R. 1398.)

Milo M. Quaife, for appellant. Thirty years old. Teaches history, Lewis Institute. Graduated Iowa College in Grinnell; 1903 taught in Sheffield (Ill.) High School. Following year pursued graduate studies University of Missouri, history and political science, M. A., spring of 1905; 1905 to 1908 graduate student University of Chicago, taking work in history and political science. History, major field. Doctor of philosophy, Magna cum laude, spring of 1908. Since fall of 1908 teaching at institute.

Published a monograph on "The Doctrine of Nonintervention of Slavery in the Territories," privately printed in 1910, which was his doctoral thesis; edited diary of President Polk, published in four volumes. Favorably reviewed.

May 18, 1911, read paper before Mississippi Valley Historical Association on the Chicago massacre. June, 1909, delivered lecture before Chicago Historical Society on "The Obscuration of James K. Polk." Two articles for publication in McLaughlin & Hart's *Cyclopedia of American Government* on Wilmot Proviso and Nonintervention with Slavery. Several months engaged in preparing history of Fort Dearborn. (R. 1399-1401.)

With reference to historical authors, states as follows: Beck rests statements on Graham and Philips. Seemed to have used other reports in general discussion. Adds nothing to Graham and

Philips. (R. 1401.) Cass's letter: Cass being able man and well informed, is worthy of consideration. Makes general mention of channel of trade by way of Chicago and Illinois. No specific mention of Desplaines. "When usable, the Desplaines would probably be used in connection with this route," other times not. Quotes Charlevoix's letter, "but as this river is only a brook in this place." (R. 1405.) Fact that Charlevoix mentions Chicago-Desplaines route as one of two routes of travel implies nothing as to navigability. Charlevoix told Desplaines would not float a canoe at that season, which was September, when witness states large part of the Desplaines dry. (R. 1408.)

Extract from Child shows "the canoe could and did go up the Desplaines in a time of flood." (R. 1409.) Darby not well acquainted with geographical conditions of this region. (R. 1411.) Careless in saying Enquirer's editorial settled problem of waterway. Thinks editorial prejudiced (R. 1412-1413) and by one not well informed as to river.

Most trade to Canada by way of Wabash (R. 1414) or on horses. Thinks Kenzie used horses in trade.

Extracts referring to period of 1778-1790, mention Wabash as principal trade route between western posts and Canada. Another passage says before cession of Illinois territory to English, trade in Illinois conducted by Canadian and Louisiana merchants; afterwards English mer-

chants started a commercial war for trade of the Ohio and the Mississippi, and had one decided advantage in being able to deliver goods cheaper than they could be delivered by way of lakes and the Wabash or up the Mississippi. (R. 1415-1417.)

Quotes Carter a teacher in the Illinois College at Jacksonville, graduate student of University of Illinois in work which won Justin Winsor prize, 1908, "Trade conditions in Illinois country, 1765-1775." Footnote quotes Hutchins as showing "during the French régime the French-Canadians traded extensively in this region." Carter says English found French fur traders hard to dislodge. Extract contains statement that surplus products of soil were floated down New Orleans, and that all flour for the lower country came from Illinois. Notes plans of Gage to invade Louisiana for purpose of controlling trade. (R. 1419-1423.)

Extract from manuscript by Jacob Varnum mentions trade falling off one-half in 1818. (R. 1425.) Memoirs of early days of Mackinac Island, by Elizabeth Baird, born there in 1810, tell of trip to Chicago in 1816. Captain could get no cargo for return trip. (R. 1429.) Says Graham and Philips report shows boat sometimes used Desplaines, but larger part of time it could not be used. (R. 1430.)

Drown and Dupratz not reliable. (R. 1433.) Latter said first travelers came by Illinois, when they came by Fox-Wisconsin route. (We note

they returned by the Illinois-Desplaines River.) Evans gives little light on use of Desplaines. (R. 1435.) Quotes from article by Prof. Craig, of Purdue University, on Indian town Ouiatanon, Ouiatanon, Indiana, which says, that while it is probable that fur traders visited this State between 1671 and 1683 it is probable that trading posts were not established until the Indian Confederacy was broken. (R. 1438.)

Quotes various extracts from different writings to show that on account of hostility of Iroquois Indians, portages from Lake Erie were little used until the eighteenth century, but later became of great importance. (R. 1442-1444.)

Quotes Andreas as saying that a route (which witness identifies as the Desplaines), became so dangerous soon after the opening of the 18th Century that it was gradually abandoned and finally almost forgotten—this on account of the long war between the Illinois and Iroquois. (R. 1444.) “I call attention to the citations from Andreas, showing that beginning about 1700 the use of the Desplaines route by the French, which had been comparatively frequent prior to that date was abandoned, owing to the wars which have been referred to in that connection.” (R. 1450.)

Kinzie was in Chicago 1804 to 1812; Forsyth, his partner, was at Peoria. He relied mainly on the horses. 1812 to 1815, Kinzie's establishment was abandoned. (R. 1450-1451.) Witness says

this brings us to approximate date of the editorial, "and it is on the foregoing line of reasoning that I base my conclusion that the interpretation that thousands of boats such as were described in the editorial passed over from Lake Michigan to the Illinois in that period, is strained and exaggerated." (R. 1451.)

(Note that witness is mistaken, as editorial was written in 1819 when Graham and Phillips made their report.) Says the title of Hutchins's Topographical Description, "the road from Detroit to the Illinois" and its contents show that it is a well-known route in about 1774, and it is additional evidence to show that the principal relations between Illinois and Canada was by way of the Wabash. As to whether a journey by the Illinois can fairly be inferred to be by the Desplaines, the witness says it depends upon circumstances in each case. (R. 1451.)

Again refers to Carter as showing that in 1768 French controlled most of the trade in Illinois country and sent it out by way of New Orleans. (R. 1455-1460.) Says Flint was laborious and faithful compiler, relying largely on other writers. Thinks Flint never personally visited Chicago and was misled by the popular impression that Desplaines was a navigable stream. (R. 1460.) Says nothing to warrant Alvord's conclusion that Jesuits used the Chicago-Desplaines route as a usual thing. Says Schoolcraft, Tousey, and Kennedy by personal examination proved erroneous popular

impression that Desplaines was navigable. (R. 1462.)

Hoffman based on Keating and gives no additional weight. (R. 1464.) Keating thought a slight expenditure would cause Great Lakes to empty into Gulf as formerly they did. (R. 1466-1467.) Thinks Keating had no direct knowledge of Desplaines, as he speaks of it as being deep in June. (R. 1467.) Tousey examined river 1823, says it was ignorantly supposed that only a small sum would be necessary to open a waterway between Chicago and Illinois. Says such a waterway would be expensive, but cost would be justified. Says Schoolcraft disagreed with Keating on fertility of soil (R. 1470); concludes, Keating not very reliable. (R. 1471.) Quotes an article to show that soldiers had plenty of rations, whereas Keating said they didn't have. (R. 1473, 1476, 1479.)

Read from Featherstonehaugh criticizing Keating. (R. 1481-1487.) Reads from Prof. Bourne, who had a very high opinion of Keating and Schoolcraft, on how much of Carver's work was accurate. Both criticize Carver. (R. 1491-1497.) Quaife found only one adverse criticism of Featherstonehaugh "that may be regarded as at all serious." Witness says Keating went no farther than Desplaines, and formed conclusion as to its navigability. (R. 1506.) Discussed accuracies of Wau-Bun by Mrs. Kinzie. Considered accurate by Dr. Quaife and other historians. Tells

of Hubbard making trips down the Desplaines with difficulties. Witness referred to his trip easily made up the Desplaines in flood time with 12 boats (R., 1511), and one made with difficulty during the low-water season. Concludes that from 1818 to 1824 Desplaines route was used by American Fur Co. twice yearly, but the route was difficult and soon abandoned by Hubbard (R. 1515), who used horses instead.

Thinks Cass took route because all other routes blockaded by hostile Indians. (R. 1516-1520.) Suggests might have come by way of Chicago to warn whites and not because it was the best route. (R. 1520-1523.) All accounts agreed Cass made a very fast trip. Hubbard's account least trustworthy; McLaughlin's deduction from that account, that Desplaines is navigable, is unwarranted. (R. 1525.)

Hutchins a good authority. Says inference that Desplaines was navigable because of use of the word "portages" is unwarranted. "Illinois, 1837," not reliable. Imlay did not go up the Illinois River. (R. 1528.) Witness says that Prof. Alvord mixed up the trips of Joliet, Frontenac, and Dablon. (R. 1530.) Joliet overenthusiastic about the Illinois country and the Desplaines water route and made unwarranted statements. Witness suggests that Joliet and Marquette might have carried canoe from Chicago River to Illinois River. (R. 1532.) (Note.—Query: "How

did this make Joliet overenthusiastic about the Desplaines?")

Joutel took eight days to make 100 miles over the Illinois-Chicago route. (R. 1533.)

Historians have favorable opinion of John Kenzie, but he was a man of violent temper and had interest in reviving trade. He killed a rival in a business quarrel in a way suggestive of murder. "I don't know, I say, that it is susceptible of proof." (R. 1535.) La Hontan had a high rating, except for his fictitious account of a trip to the "Long River." (R. 1537.) Thinks it impossible that James Logan was ever in Illinois. Refers to passage in Maj. Long's report stating that the Chicago-Desplaines route needed but a little excavation to make it ample for a canal. Says Long did not personally visit all the places which he wrote about, but relied on information from others at times. (R. 1540.) Thinks he did come to Chicago and that he did see the Chicago-Desplaines route.

Witness says the Navigator was a reliable compilation. The paper referred to 2-mile portage between the Desplaines and Chicago Rivers, and witness explains this by suggesting that the editor was never over the route. (R. 1546.) Says the editor is not entirely "frank and truthful with his readers." It does not appear that the editor was ever over this route.

Says, contrary to Prof. Alvord, nothing in Ogden's letters showing that he was on Illinois River. States he plagiarized his account of the Illinois-Chicago River route (R. 1550) from an account by one Andrew Miller. Also probably from Harding and Evans. (R. 1557-1562.)

Says St. Cosme made a portage of 30 leagues on the Desplaines. Says Thwaites exaggerated when he said nothing could be made out of La Source's muddled accounts, but he admits they are a little mixed. (R. 1567.)

Says Pattin just copied Logan's report. (R. 1568.) Refers to Schoolcraft's journey, which he finished on horseback. (R. 1571.)

The article later refers to the Illinois-Chicago route as "one of the principal points where the waters of the Lakes and the Mississippi interlock." Schoolcraft also said the French had used this route for 160 years. Witness says this would be merely hearsay. (R. 1572.)

Discuss Warden's History of the United States, which states that Illinois affords an uninterrupted navigation of 460 miles for small boats up to where it approaches Lake Michigan. Says Warden used Long and Hutchins, and his statements add no weight. (R. 1574-1575.)

Regards Woodruff as untrustworthy. (R. 1578.) Early map makers referred to by Government relied on explorers' statements and were often inaccurate. (R. 1580.) Witness relied largely on Winsor in criticizing various maps. (R.

1597.) Witness then summarizes fourteen specific uses of the river; seven in the spring. "Cass also took a trip up the Desplaines in 1827 in July." (R. 1611.) Quaife differs with Prof. Alvord's conclusions (R. 1615) and Dr. Thwaite's conclusions. (R. 1617-1619.) Witness says for eight or nine months it was impossible to navigate the Desplaines, and his statement that it was merely difficult was unfair. (R. 1621.) Differed with Prof. McLaughlin's conclusions. (R. 1623.) Says McLaughlin did not examine some of the authorities which presented the difficulties in the strongest light. Quaife's conclusion is that the Desplaines was sometimes navigated by canoes and sometimes in the spring by boats, and other times navigation was extremely difficult, and usually impossible. (R. 1626.) Said maps introduced by Government largely based on hearsay. Says Morse relied on Hutchins. (R. 1633.) Some maps didn't mention the Desplaines River and some called it the Chicago River. Witness seems to think that all more or less inaccurate. (R. 1636.)

Witness refuses to answer yes or no as to whether the Desplaines was used by fur traders in the seventeenth century up to about 1830. He admits some canoes passed up and down. (R. 1645.) Refuses to draw any conclusions as to whether or not the Desplaines was ever used except in the fifteen instances pointed out. Presumed the river was used at other times, but no

written account was handed down. (R. 1646.) Would not say whether there was any fur trade in Illinois country in the eighteenth century. (R. 1660.) At any rate, Indian wars lessened the use of the Illinois-Desplaines route. (R. 1662.)

Counsel for Government read to witness a number of extracts commenting on the trade of the Illinois country around Cahokia, etc., to Canada. (R. 1667-1672.) On page 1685 appears a letter from Thomas Jefferson dated July 17, 1808, which refers to the formation of an Indian trading company to be "under the direction of a most excellent man, a Mr. Astor, of New York, long engaged in the business and perfectly master of it." Also letters from settlers and explorers commenting on such trade and its importance, showing that fur companies were carrying on a trade in the Illinois country of some considerable amount between 1780 and 1825. Hubbard, Deschamps, Kinzie and Forsyth, Berthold and Chouteau, and the American Fur Company were some of the traders and trading concerns. (R. 1687.) Witness would not say whether the most active period of trading was 1783 to 1825.

Again enumerated uses of the river. (R. 1689.) Reiterates statement that most of the time parties using the Desplaines had to push or roll their boats a good part of the way, as the water was so shallow. (R. 1696.) Blanchard's History of Chicago speaking as of 1880 gives an account of a Mr. Galloway moving his family and valuables

from Chicago in 1827 through Mud Lake and down the Desplaines and Illinois to their new home—a place then called the Grand Rapids of the Illinois. (R. 1702.) Counsel for Government read other extracts showing other trips not enumerated, but witness replied that he had not made an independent investigation and could not say whether the accounts were accurate or not. Admits other trips were possible, but steadily refuses to say other trips were made. (R. 1705.) Gives reasons for stating that most of 15 enumerated trips were made in spring or fall. (R. 1707.) Also difficulties encountered by each voyager. Gives detailed account of La Salle's trip (R. 1711-1713), and discusses other trips of La Salle (R. 1713-1715), and statement of La Salle that in the summer there was no water in the Desplaines as far as Fort St. Louis, where the navigation of the Illinois begins at this season and continues as far as the sea. (R. 1717.) He used canoes part of the time and part of the time a sailboat. (R. 1721.)

Cross-examination of witness on relative reliability of Keating and La Salle. (R. 1729-1730-1731.) Joutel's chief difficulty with Desplaines was excess of water in the river. (R. 1736.) St. Cosme found water too low and had to make a long portage of about 15 leagues. Charlevoix did not use route. (R. 1754-1757.) High opinion of Charlevoix's accuracy. (R. 1759-1760.) Discusses Heward's trip in 1870, Schoolcraft's. (R. 1769-

1774-1778-1779-1780.) Said he was acquainted with Beck's Gazetteer, the American State Papers. (R. 1802-1806.) Beck's Gazetteer referred to boats of 8 to 10 tons' burden passing through the Desplaines route. (R. 1807.) Witness said Beck referred to the time of the spring floods.

Reads from Wau-Bun to show that Kenzie used pack horses. Said Hubbard used pack horses also. (R. 1808-1809.) Discusses reliability of Darby when he said St. Louis Enquirer's editorial settled the question of the navigability of the Desplaines. (R. 1812.) Thinks Benton wrote editorial in about 1819. (R. 1814), and thinks Benton was never in Chicago. Might have talked with travelers, but probably never made a personal investigation. He does not believe statement in Drown's History of Peoria, that John Hamlin shipped provisions up the Desplaines in 1825. (R. 1821.) Witness says apparently Illinois River used to be Illinois and Desplaines on Dupratz's map. Dupratz had said there was some travel from Canada to the Mississippi by way of the Illinois. (R. 1827.) Refers to Joliet's, Hennepin's and Lahontan's maps as only ones which were, strictly speaking, first-grade sources. (R. 1829.)

Does not suppose the Desplaines route, or passage from Flint at any rate, in the light of my general knowledge of the subject, indicates that the Desplaines was used as an avenue of commerce commonly or generally. (R. 1831.)

Discussing Schoolcraft (R. 1833-1838), counsel for Government calls attention to witness' statement that Hoffman's account was based on Keating, and also calls attention to letter of Hoffman stating that he had discussed the canal with Maj. H., United States engineer. (R. 1840.)

Witness had said Hutchins' work was based on Kennedy's, but now says Kennedy never saw Desplaines. Hutchins had said there were only two portages, a 4-mile portage and a smaller one, between the Illinois and Desplaines Rivers.

Imlay said that Hutchins gave a good account of Illinois country. Witness agrees Imlay has high standing among historians. (R. 1851.) Governor Hull, of Michigan territory, discussed. Witness thought it unlikely he had ever been to Desplaines River personally. (R. 1855.) Says Lahontan probably told the truth, as he wanted the people for whom he was working to believe him, and they were somewhat acquainted with the Illinois country. (R. 1857.)

Says Kinzie probably did not tell the truth when writing to Cass, although he was writing to one somewhat familiar with the territory. This letter mentioned the importance of the Illinois-Desplaines route, "as at present boats of several tons burden" pass from Lake Michigan into the Mississippi. (R. 1856-1857.)

Witness discusses story about Kinzie once killing a man (R. 1857-1861) and about a court-mar-

tial once held to see if Kinzie was in the British service during the war of 1812. (R. 1862-1868.)

Government introduced a map by Edwin James, London, 1823, purporting to show route followed by Maj. Long in 1816-17 which went through Illinois River Valley and back again. Witness would not say positively that Maj. Long was in the Illinois country at that time. (R. 1871-72.)

Regarding Alvord's statement that Ogden was on the Illinois River, Quaife finds nothing in Ogden's letters to support this. (R. 1877). Quaife discussed a number of early maps. (R. 1882.) Don't think much of Woodruff's History, which mentions grain being shipped up the Desplaines. (R. 1885.) Says he wonders why they didn't ship anything else.

Cross-examined on general knowledge of maps. (R. 1885-1915.) Some of these maps show supposed portages; some, a line which might be the Desplaines; some indicated routes which travelers used; some the proposed canals; some of them were fairly good maps and some very poor. Attaches no significance to the fact that a certain map called a certain road between the Chicago and Desplaines Rivers a "portage road." (R. 1915.) Witness admits that he thinks it likely that traders used the Desplaines if they had occasion to go that way and found it practical to use it. (R. 1917.) He admits that it was used many times during the 40-year period of 1783-1825 by traders or travel-

ers, but would not go so far as to say that it was commonly used. (R. 1917-18.)

Alvord recalled to change a statement about "flat boats" to "flat-bottomed boats" which he said went up and down the Desplaines in the eighteenth and the first part of the nineteenth century. (R. 1919.)

Quaife took up Joutel's Journal and said that parts were missing and had been supplied by Margry "as best he might." (R. 1920.) Discussed other maps of Illinois country (R. 1923) by Governor Hull, of Michigan territory and Hennepin. (R. 1924.) Said maps were erroneous in many respects.

Gives opinion as to what papers of Hubbard were authentic and which were not. (R. 1926-1930.)

Hobart W. Harper, photographer, identifies photographs of Desplaines between Lockport and Romeo, about 2 miles above Lockport (R. 1974-1975), in the stretch between Chicago and Joliet, which show the river nearly dry at places which was taken September 12, 1908.

Daniel W. Mead for appellant. Forty-six years old. Civil engineer. Chief engineer for appellant. Professor of hydraulic and sanitary engineering, University of Wisconsin. (R. 1992.) Familiar in a general way with Desplaines River. (R. 1995.) Says flow would probably be maintained a little longer if stream was well forested,

but forests make little difference. Discusses this question. (R. 1997-1998.) Mr. Mead only familiar with Desplaines in a general way. Has passed over it. (R. 2000.) Admits deforestation would have larger effect on a stream with an impermeable subsoil like the Desplaines than on one with a permeable subsoil. Says large swamp area will somewhat prolong the flow of a stream, but not to any great extent. Agrees that forests consume less water than open country. (R. 2004.)

FACTS OF WHICH THE COURT TAKES JUDICIAL NOTICE.

There are many facts of past and current history of which the court must take judicial notice and which have a bearing upon this case. Particularly is this true with respect to the present state and importance of shallow-water navigation which has been the subject of much modern discussion. For the information of the court on this subject, we reprint as an appendix to this brief several articles dealing with shallow-water navigation.

POINTS AND AUTHORITIES.

I.

The portion of the Desplaines River in question is a navigable water of the United States subject to the paramount authority of Congress to protect its navigability.

1. The Desplaines River from Portage Lake to its mouth where it joined with the Kankakee to form the Illinois was navigable in a state of nature and for 160 years was actually navigated for commercial purposes.

(a) This is amply sustained by evidence.

(b) The District Court and Circuit Court of Appeals having concurred in this finding, the general rule applies, "that concurrent decisions of the two lower courts on an issue of fact will be accepted by this court unless shown to be clearly erroneous."

(1) *Luckenbach et al. v. McCohan Sugar Refining Co. et al.*, 248 U. S. 139.

(2) *The Wilderoft*, 201 U. S. 378-387.

(3) *The Carib Prince*, 170 U. S. 655-658.

2. The navigation of the Desplaines River by the means shown by the evidence in connection with foreign and interstate commerce makes it a navigable water of the United States.

The Montello, 20 Wallace, 430.

St. Anthony Water Power Company v. Water Commissioners, 168 U. S. 349, 359.

United States v. Chandler Dunbar Company, 229 U. S. 53.

Hickok v. Hine, 23 Ohio State Reporter, 523, 527.

Brown v. Chadbourne, 31 Maine, 9, 19, 23.

Moore v. Sanborn, 2 Mich. 519.

Morgan v. King, 35 N. Y. 454.

3. The fact that navigation may be difficult and at places interrupted does not render a stream unnavigable. (See cases supra.) The character of a river as a public highway is not determined by the frequency of its use, but its capacity for being used.

Hickok v. Hine, supra, and other cases cited.

4. Nor is it essential that the stream should be capable of being navigated at all seasons of the year.

Morgan v. King, supra.

Brown v. Chadbourne, supra.

Nor does navigability depend upon the amount of tonnage, depth of water, nor capacity for use by modern means of transportation.

The Montello, supra.

State v. Pacific Guano Company, 26 S. C. 50.

Heyward v. Farmers' Mining Company, 42 S. C. 139.

Burroughs v. Whitwam, 59 Mich. 279.

Wadsworth, Admin., v. Smith, 11 Maine, 278.

Lewis v. Coffey County, 77 Ala. 190-193.

II.

Where a stream is navigable in a state of nature the power of Congress to protect and promote its navigability can not be lost or destroyed by nonuse or artificial depletion.

People v. Page, 56 N. Y. 834.

III.

As the Chicago-Desplaines-Illinois route was one of the navigable waters leading into the Mississippi actually being navigated when the ordinance of 1787 was adopted and when the acts of Congress of May 18, 1876, and March 26, 1804, governing the sale of 1804 land in the territory were passed the public easement of navigation can never be destroyed or lost. X

1. It was within the constitutional power of Congress to enact the provisions of the acts of 1796 and 1804 for the purpose of regulating interstate commerce by perpetuating the public highways constituted by the navigable streams in the Territories.

Coyle v. Oklahoma, 221 U. S. 559, 574.

U. S. v. Sandoval, 231 U. S. 28, 38.

Ruddy v. Rossi, 248 U. S. 104.

2. And these enactments were not affected by the admission of Illinois as a State. (See cases cited under 1.)

3. The provision of the act of 1796 "that all navigable rivers within the territory to be disposed of by virtue of this act shall be deemed to be and remain public highways" created a perpetual pub-

* C 29, 1 Stat 464. (sect 9)

X C 35, 2 Stat 279. (sect 6)

lic easement for the purposes of travel and appellant holds its title subject thereto.

4. The Government denies that the public easement over a navigable water can in any case be lost, but if the loss of such public easement were for any reason and in any case possible, it could not be possible in the case at bar since the very acts providing for the disposal of the land in question fixed the character of the navigable streams as public highways and make the public easement perpetual.

IV.

The act of March 3, 1899, is an act for the protection of the navigability of the stream and prevents impediments to its navigability even in the absence of actual navigation.

United States v. Rio Grande Irrigation Co., 174 U. S. 690.

United States v. Chandler Dunbar Company, supra.

Discussed in the instant case, 256 Fed. 799, and so held by the court of appeals.

V.

As neither Congress nor the Illinois Legislature has consented or given authority for the building of the dam in question it is within the inhibition of the statute.

Cummings v. Chicago, 188 U. S. 410.

Montgomery v. Portland, 190 U. S. 89.

VI.

The fact that the plans for the dam have never been approved by the Chief of Engineers and by the Secretary of War likewise brings the proposed structure within the inhibition of the statute.

(See cases cited under V.)

VII.

Were it possible for the navigability of the stream to be lost (which the Government denies) navigability of the portion of the Desplaines in question in a state of nature and the present navigability resulting from the augmenting of its flow would bring it within the act of 1899 while at the same time the acts of 1796 and 1804 would prevent any claim that the act so applied was unconstitutional or affected vested property rights, since the riparian owner under the public land acts holds its title subject to the public easement.

VIII.

While firmly resting its case on the natural navigability of the stream the Government submits that the increased navigability of the stream caused by turning in the waters of Lake Michigan would, had it been unnavigable in a state of nature, bring it directly within the control of Congress and the terms of the acts of March 3, 1899.

Ex parte Boyer, 109 U. S. 629.

The Robert W. Parsons, 191 U. S. 17.

Monongahela Navigation Company v. U. S., 148 U. S. 312, 342.

Gilman v. Philadelphia, 3 Wall. 713, 724.

Gibson v. U. S., 166 U. S. 269.

IX.

The War Department never in any way "assured appellant's predecessor that the Desplaines River was not a navigable stream" or took any official action in regard to appellant's plans.

X.

No action of the War Department could estop the United States from asserting the navigability of a stream and removing or preventing an obstruction to its navigability and without compensation.

Greenleaf Lumber Co. v. Garrison, 237 U. S. 251.

Oyster Co. v. Briggs, 229 U. S. 82.

Union Bridge Company v. U. S., 204 U. S. 364, 400.

Philadelphia Company v. Stimson, 223 U. S. 605.

United States v. Chandler Dunbar Company, 229 U. S. 53, 68.

West Chicago Railroad v. Chicago, 201 U. S. 506.

Chicago, Burlington & Quincy Railroad v. Drainage Commissioners, 200 U. S. 561.

XI.

This court has never passed on the merits of the present controversy in any of its phases but has expressly declined so to do.

Illinois v. Economy Power Company, 234 U. S. 497.

XII.

The portion of the Desplaines in question connects with the Sanitary and Ship Canal on the north and the Illinois on the south, thereby completing the navigable water connection between the Great Lakes and the Mississippi.

XIII ~~XXXX~~.

The power of Congress to protect the navigability of waters does not rest alone on the power to regulate interstate and foreign commerce, but is also an incident of its power to make war, raise and support armies, etc. (Opinion of Court of Appeals, 256 Fed. 799.)

ARGUMENT.

In the course of its brief appellant states that the Government is seeking to use the act of March 3rd, 1899, to accomplish an inequitable and unjust end. That suggestion will be dealt with in its proper place, but here it is pointed out that it is obviously the sole purpose of the Government to protect the navigability of that part of the Desplaines River lying between its junction with the Illinois and Michigan Canal and Sanitary and Ship Canal at Joliet and its confluence with the Kankakee River at its mouth, a navigability demonstrated by the successful navigation carried on for purposes of useful foreign and interstate commerce for over 160 years until that navigation was prevented by the erection of dams and other

obstructions and superseded by the superior means afforded by the Illinois and Michigan Canal. Its good faith is demonstrated by the enormous importance of this link in the Lakes to the Gulf waterway, which has, in repeated reports of Government engineers, been declared to be the one available means of connecting the Sanitary and Ship Canal with the head of steamboat navigation on the Illinois at La Salle or Ottawa.

In considering the good faith of the Government, the court can not but take judicial notice of the fact that the State of Illinois itself had, prior to the beginning of the suit, empowered the general assembly by a constitutional amendment to expend \$20,000,000.00 for the extension of the waterway through the strip in question and down to La Salle, and that legislative action for the expenditure of this sum in the improvement of this portion of the Desplaines and the upper Illinois had been taken by the general assembly, and that appellant's claim of a right to place a dam in the river has been the sole impediment which has delayed the completion of this improvement for nearly thirteen years. The steps by which appellant and its predecessor sought to put themselves in a position to exploit the water power created by the expenditure of \$63,000,000.00 of public money have been referred to in the statement of facts and will be spoken of again in the argument.

I.

The portion of the Desplaines River in question was a part of the Chicago-Desplaines-Illinois route navigated for purposes of interstate and foreign commerce for 160 years by the usual means employed in lake and river navigation and was and is a navigable water of the United States and subject to the paramount authority of Congress to protect its navigability.

The position taken by the Government is that in this case in which it presented to the district court its bill in equity to prevent an unlawful obstruction to a navigable stream, it is entitled to have the merits of its case considered and decided upon the record in this cause without reference to conclusions reached by any other court in any other case between different parties.

Appellant, however, from the outset rests its case upon the conclusions of the Supreme Court of Illinois, in a case to which the United States was not a party, and in effect asks the reversal of the district court and the court of appeals on the ground that they do not harmonize with the conclusions of that court.

The district court found that the State court's judgment was "obviously rendered on record vitally different on the facts from record here as to actual use of stream for trade and travel by customary mode at time of use." While the Government, even if it were possible to present the

two records to this court would find it an endless task to compare them, and point out the vital differences appearing, it has with some painful labor examined and noted in this brief numerous items of important and compelling testimony received in the instant case and in no way touched upon by the evidence before the State court. But to show the essentially different character of the two records, it is only necessary to call attention to a portion of the State court's opinion quoted in appellant's brief at page 130. "There is not in this entire record a well-authenticated instance in which a boat engaged in commerce navigated the waters of the Desplaines River."

Compare this finding by the State court with the admission by appellant's own historical experts as to the commercial use of the river "from 1818 to 1824" by the American Fur Company and the employment of a brigade of twelve to thirteen *Mackinaw boats* (R. 1660), which annually, at least during the years mentioned, made a voyage from Mackinac Island to Chicago and down to the company's trading posts on the Illinois, going by way of the Chicago-Desplaines-Illinois route, using two small portages in the fall and returning in the spring with their boats loaded with furs over an unbroken navigation of water by the route in question, and we have an indication of the essential difference between the record in the State

case and the record here. In view of this difference alone we submit that the decision of the State case can not be considered as in any way even persuasive, and we therefore proceed to present the case on the record presented in the district court.

Before dealing with other evidence concerning the navigability of the Desplaines River, attention is called to appellant's suggestion that, as there is no evidence of the navigation of the Desplaines *within the memory of living witnesses*, this is very persuasive that it is not navigable. In answer the Government calls attention to the fact that since 1848, *sixty-two years* prior to the time when the taking of evidence began in this case, the Desplaines has been paralleled by the Illinois and Michigan Canal, which was intended to and did afford an obviously superior navigation, and that according to counsel's own statement, there was a dam obstructing navigation on the site in question erected in 1826, three at least in 1833, one in 1835, at least two in 1839, one in 1841, and one at least in 1846, while the construction of the Illinois and Michigan Canal began in 1836. Without referring to the controverted question of how much the building of the canal and other causes depleted the flow of the Desplaines, it is enough to say that practical navigation of the Desplaines had been rendered impossible by artificial obstructions for at least *seventy-seven years* prior to the hearing of this cause, and that in consequence the absence of

proof by living witnesses of navigation within their memory is of no probative force.

In affirmative support of the navigability of the river, we have the concurrence of the two Federal courts passing on this case. The district court found proof of actual navigation from early fur-trading days down to the end of the first quarter of last century. "Proof of actual specific use by the customary mode of trade and travel by water—that is, by kind of craft then used for that purpose in rivers of the United States—throughout this period appears. Controversy here has really been as to extent rather than to the fact of such use." §. 32
 The court of appeals specifically finds that "from the latter part of the seventeenth century, through the first third of the nineteenth century, men engaged in the fur trade passed up and down the Chicago and Desplaines Rivers in canoes and flat boats very regularly." It lists fourteen specific instances of the use of the Desplaines down to the year 1830; says many others not so well authenticated were disclosed and mentions numerous historical references to the Chicago-Illinois route. "No doubt other instances of its use may properly be inferred. It was employed by the American Fur Company down to 1825 and then abandoned for other routes." It finds that the fur trade was a leading branch of commerce in the western world and one of the characteristics of the Desplaines River. "Large quantities of supplies of various kinds needed by the settlers in a new

country were also transported over the Desplaines during the same period in boats of the size and character then commonly used in river commerce, this transportation being carried on between Chicago, St. Louis, and other points. Canoes of several tons burden were used; some were 35 feet long by 6 feet wide; some 33 feet long by $4\frac{1}{2}$ feet wide, worked by paddles, occasionally a sail, and had a crew of eight men, carrying as much as 6,000 pounds of freight, as well as 1,000 pounds of provisions. The pirogues were manned by six or seven oars; the batteaux were larger than the pirogues; the Durham boats were heavy freight craft 60 feet long, 8 feet wide, 2 feet deep, with a capacity of 15 tons, drawing 20 inches of water." After referring to the dams, they say that some were constructed "as early as the year 1835, and their existence in the river was a source of obstruction to the commerce that had formerly been carried on."

We note here that appellant's chief historical witness says the boats used by the American Fur Company were Mackinaw boats "used on the Great Lakes and the rivers emptying into them." (R. 1660.)

In view of the well-established rule that where the district court and court of appeals have concurred on a question of fact this court will not disregard that finding unless it is clearly contrary to the evidence, the question arises as to what ground appears here for overturning the finding

of the two courts which the brief review of the evidence already given shows is definitely and affirmatively sustained by historical evidence of the highest character and supported by the conclusions of Professors Alvord, McLaughlin, and Thwaites, three of the most distinguished and well-grounded historians in western history; one of whom, Professor McLaughlin, has some special and unusual qualifications as an expert in the field of historical evidence.

Graham & Philips' Report to the Government in 1819 that boats of 6 and 8 tons engaged in the Mackinaw and Mississippi trade run through backwards and forwards so as to make no portage between Mackinaw and the Mississippi River in spring has already been referred to. This was not in the State case, nor was Hubbard's testimony as to the use of 12 and at times 13 Mackinaw boats navigating from Mackinaw down to the trading posts on the Illinois River by way of the Desplaines with some difficulty in the dry season and with an unbroken navigation coming back loaded with furs in the spring and being obliged at times to send back part of the boats to Chicago for an extra trip on account of the amount of furs.

Appellant's witnesses admit this course of trading from 1818 to 1825; but the American Fur Company, organized in 1816, was a reorganization of the Mackinac and Northwest companies formed in about 1784, and engaged in the Illinois River

fur trade, following the breakup of the "General Store" organized by a majority of the Mackinac merchants in 1778. (R. 1671.) And that the fur company was only continuing the methods employed by its predecessors is evidenced by Hubbard's statement in proof of the location of a certain house at Chicago in 1778 that "this tradition I received from Antoine Deschamps and Antoine Beson, who, from about 1778, had passed from Lake Michigan to the Illinois River yearly. They were old men when I first knew them in 1818." (R. 1667.) In 1818 Deschamps was superintendent of the Illinois trading post of the company, and had been engaged in the fur trade on the Mississippi, Illinois, and Ohio Rivers for about forty years.

Nor was there any evidence in the State case of the annual trips of Antoine Deschamps to St. Louis for supplies, nor the rapid trip made by Governor Cass, in July, 1827, according to appellants' witnesses (R., 1203), when he came up the river with his secretary in a canoe manned by 12 paddlers and a steersman and averaging 60 miles a day. Apparently there were 18 men in the canoe. (R., 305.) Nor was the letter from Governor Cass to the Secretary of War in 1815, stating that there are three great channels of communication by which goods may be introduced into the Mississippi and Missouri country from the British Dominions. One is by way of Chicago and down the Illinois. Nor the letter of John

Kinzie to Cass, saying that at present boats of several tons burden can pass from Lake Michigan into the Mississippi; nor the statement of William Darby, famous United States surveyor, in 1818, that the Chicago and Illinois Rivers offered the most natural and eligible connection between the northern and southern waters of the United States; nor Thomas A. Benton's editorial in the *St. Louis Enquirer*, in 1819, that "the French of Canada and of the Valley of Mississippi have communicated through this channel since the settlement of the countries. In high water, boats of ten or a dozen tons pass without obstruction. In dry season they are unloaded, drawn by oxen over a portage of a few miles. Hundreds, nay thousands, of boats have been seen at St. Louis which have made a similar passage." (R. 106.)

Mr. Schoolcraft's statement concerning his trip in August 13, 1821, nor the statement of Childs, a fur trader, recounting a trip in 1821, returning from St. Louis "by way of the Illinois River" and finding the portage full of water, nor the fact that the Illinois delegate got the Illinois boundary changed to give the State a port on the lake "to bring in the State northern settlers by the northern waterway," obviously referring to the Desplaines. Nor was the report of William H. Keating, professor of mineralogy and chemistry in the University of Pennsylvania, published in 1825 in London, which recounts that as they were informed that the Desplaines was frequently trav-

eled, they determined to use it, and were informed by Lieutenant Hopson, who accompanied them to the Desplaines, that he traveled it with ease in a boat loaded with lead and flour; nor was Fonda's trip up the Desplaines. Drown's Record of Historical Review of Peoria in 1850 states that John Hamlin, *still living in Peoria*, when a clerk in the American Fur Company store at Peoria exported the first products to Chicago in 1825 in keel boats as far as the mouth and from there in Durham boats to Chicago by way of the Desplaines. The report of the select committee to the Eighteenth Congress in 1825, stating that repeated passages have been made by uninterrupted navigation from the Illinois River into the lake, was not in the State case, nor the statement in the American Gazetteer in 1797. The Navigator in 1824 refers to the communication. The letter of Lieutenant John G. Furman, U. S. A., 1830, and the extract from Flint's History, 1832, are not in the State case. Schoolcraft's Narrative, 1832, says the route has been used by the French by canoes and flat-bottom boats in its natural state for 160 years. The statement by Charles F. Hoffman, 1835, of navigation by boats of 18 tons is not in the State case, nor the statement in the History of Will County, published in 1878, that farm products were boated up the Desplaines to Chicago. There is a reference to the use of the route from the first discovery of the country by Europeans "in Illinois in 1837," which is not in the State case.

(R. 162.) Justin Winsor's reference to the route as one of the three trade routes to the Mississippi states that before the end of the seventeenth century the portages at the head of Lake Michigan "have become the best known of all, and there had been a trading post for some fifteen years at the Chicago River." (R. 166.) There is a reference to the route in *The Old Northwest*; also one in *History of Wisconsin*, by William R. Smith, referred to in *The Montello*. Neither Professor McLaughlin nor Dr. Thwaites testified in the State case. Attention has been called to the fact that the United States surveyor in 1821 made a meander survey of the stream, noting the point of connection with Portage Lake, which connects with the Chicago River as "head of navigation." (R. 2301-2344.)

There is also a reference to Chittenden which is not in the State case, nor was Logan's report in December, 1718, to Governor Keith, of Pennsylvania, which describes the route, nor Charlevoix's reference to it in 1721, nor was the letter from Choiseul, prime minister of France, to the French agent negotiating peace terms, nor were the extracts from the Haldimand papers, nor the statement of General Collot, governor of Guadeloupe, referring to navigation of the route by boats carrying from fifteen thousand to twenty thousand weight, made apparently in the latter part of the eighteenth century, nor was the statement of Robert Dickinson in 1793, nor the peace treaty nego-

tiated by Anthony Wayne in 1795, securing free passage over this route, nor the statement by Thomas Forsyth in 1814. We do not feel justified in going more into detail or referring to the numerous specific instances of navigation over the route which have already been referred to in our statement of the case.

Professor McLaughlin calls attention to the fact that the great majority of the men traveling upon the fur trade or in military expeditions were not in the habit of making records; that the unlicensed fur traders who were subject to severe punishment would naturally avoid making records, while the great mass of material in the French archives supplied by the Jesuit missionaries is still to be unearthed. Professor Alvord says that one would not expect to find many accounts of actual use of a river situated far from civilization like the Desplaines was when used in the fur trade. Men using it were not given to pursuit of literature, the majority being illiterate French Canadians, while many English were not educated men. "The novelty of the travel over such a route had worn off, so that it would be surprising if there had been preserved many narratives by the men who had made the journey by themselves. To me it seems surprising that we have as many as we have preserved." (R. 299.)

It is by the merest chance that specific instances of use by the American Fur Company have been preserved, although it is clear that it was regu-

larly so used by an Illinois brigade of thirteen Mackinaw boats from 1816 to 1825, and it is interesting that although Antoine Des Champs, its superintendent, a man of education and charming personality, was engaged in the fur trade over the Ohio and over the Chicago-Desplaines-Illinois route and on the Mississippi for over forty-seven years, we have no line from him concerning a single trip which he ever took. Appellant insistently relies on the fact that Hubbard, upon succeeding Des Champs in 1825, changed the method of reaching the Indian hunting grounds and substituted the mode of going directly to the grounds by pack horses, avoiding the necessity of carrying the merchandise from the trading posts along the Illinois River to the hunting grounds on the backs of men and also avoiding the difficulties of the navigation through Portage Lake in the fall. This evidence does not support but destroys his contention, for it shows the existence of a long-established navigation of the Desplaines which Hubbard had long urged Mr. Des Champs to abandon, "but without success," and it is interesting that although the testimony of the historical witnesses shows, and the context of the very statement in question evidences the fact that the Indian hunting grounds had receded far from the river, and it was necessary to transport the merchandise from, and the furs to, the river on the backs of men, Mr. Des Champs still preferred that means of navigation to the mode of transportation suggested.

Attention, however, is called to the engineering evidence, particularly that of Cooley, amply sustaining the navigable capacity of the river in a state of nature and corroborating the historical testimony in regard to its actual navigation. Reference is also here made to various articles and reports called to the attention of the court as facts of which it will take judicial notice and attached as an appendix, which clearly establish that a stream having the capacity of the Desplaines in a state of nature is and was prior to the time this suit was instituted, capable of being navigated by the same means by which a great and immensely profitable river navigation is now being carried on throughout the United States. Evidence on this point was also introduced at the trial and has been referred to. Here it may be noted in passing that the minimum low-water depth at the shallowest place of the strip in question was, in a state of nature, 18 inches while wooden inland waterway barges of 100 to 200 tons capacity are floated on a draft of 2 feet or less, while the testimony of Governor Van Sant shows practical river navigation on from 12 to 16 inches of water, while Coen testifies that boats could be built for navigation of the Desplaines carrying a 50-ton load on 18 inches of water, and three steamboats navigating the Mississippi appear in the register with a draft of 2 feet and a net tonnage of from 52 to 83 tons. The invention of the tunnel boat, the hundreds of thousands motor boats and motor barges in use,

and the use of steel and aluminum construction, supply means of shallow water river navigation far superior to the crude and clumsy means employed from 1673 to 1827 when wind and muscle furnished the only motor power and wood the only material.

To say that a stream which was successfully navigated by the crude means employed in river navigation in the seventeenth, eighteenth, and first third of the nineteenth centuries can not be successfully navigated by the superior means now furnished seems contrary to all reason. Navigation, like history, goes through certain cycles; in one we have navigation by small crafts in small units, like the 13 Mackinaw boats of the Illinois brigade of the American Fur Company, propelled by oars and sails and probably not exceeding in capacity ten or a dozen tons. Then we have a period of canal-boat navigation, then a steamboat navigation, and finally of such tonnage and of such extravagant cost of operation that it for a time disappears even from the Mississippi. Now we have returned to a period of successful shallow-water navigation by boats drawing even less than the Mackinaw boats of the fur traders. But very obviously the test by which the navigability of the stream is to be determined has not changed. Navigability is not a cat-and-mouse affair appearing during one period and disappearing with a change in current methods. In *The Montello*, 20 Wallace, 430, the court took the impregnable

position that "It would be a narrow rule to hold that in this country unless a river was capable of being navigated by steam or sail vessels it could not be treated as a public highway. The capability of use by the public for purposes of transportation and commerce affords the true criterion of the navigability of a river, rather than the extent and manner of that use. If it be capable in its natural state of being used for purposes of commerce, no matter in what mode the commerce may be conducted, it is navigable in fact and becomes in law a public river or highway."

The learned counsel for appellant, however, seeks to demonstrate that the navigability of the Desplaines River is not equal and was not equal in a state of nature to the navigability of the Fox River. We decline to enter upon that discussion, because we submit that the question is not whether the Desplaines River is equal in its navigable capacity to the Fox River referred to in the Montello case, but whether it meets the *test* of navigability there laid down. Counsel attempt to demonstrate that there were greater difficulties encountered in the navigation of the Desplaines than that of the Fox, but the court in the Montello case say: The true test of the navigability of the stream does not depend upon the mode by which commerce is or may be conducted nor the difficulties attending navigation. If this was so, the public could be deprived of the use of many of the large

rivers of the country over which great rafts of lumber are constantly taken to market." Not only this, but it is perfectly obvious that the country would be deprived of the use of innumerable rivers which are now being navigated and of literally thousands of rivers and other navigable waters having sufficient navigable capacity, but which, on account of the fact that the development of the country has only begun, have not yet been put to commercial use. Too much insistence can not be placed upon the fact that the navigable waters of the country, not merely its great arteries, but the great network of navigable waters reaching every part of our territory constitute the main and only permanent transportation resource which the country has. Railroads in their operation consume a vast quantity of coal and steadily make for the inevitable depletion of that natural resource. A court can hardly avoid noting that we have now reached a point in their development where they are definitely inadequate to our transportation needs, and there is an increasing portion of our products which is unable to bear the actual cost of transportation. We are, therefore, at a point where the normal interchange of commodities must be assisted by a cheaper form of transportation or be largely curtailed.

What is true of freight traffic is rapidly becoming true of passenger traffic, and it has often been remarked that the low cost of transportation and the resulting general social and commercial inter-

course among our people is one of the strongest factors in making us a nation.

Thus, as the cost of transportation by the railroads increases it brings into clearer view the practical and national value of the navigability of our public waters.

That the national importance of a river rising in Wisconsin and flowing through the entire length of Illinois into the Mississippi should be doubted seems unthinkable.

The point suggested here is that when railroads began to be operated so cheaply as to make the navigation of navigable waters unprofitable, even in such notable instances as the Mississippi, this did not change the test of navigability, for if a stream was capable of being used for purposes of useful commerce, it continued to be navigable regardless of whether it could be profitably used for purposes of transportation in competition with other means at that particular moment or not. Likewise, as the stream in question here proved by actual test its availability and usefulness for purposes of interstate and foreign commerce for over a century and a half, it was and is a navigable water of the United States.

Counsel for appellant lays considerable stress on two cases decided in this court in which navigability was referred to. He calls attention to *United States v. Rio Grande, etc., Company*, 174 U. S. 690, and says that the distinction made between the Rio Grande and the Fox is even more

applicable to the Desplaines. It may be noted that in the case of the Rio Grande the only claim made was that in the part in question it had been used for floating and transportation of rafts, logs, and poles. The district court read numerous affidavits, extracts from geological reports, agricultural reports, reports of engineers, histories, and other information, and took judicial notice of the fact that the Rio Grande was not navigable within the territory of New Mexico. This ruling was sustained by the Supreme Court of New Mexico, and *the trial court's right to take judicial notice of the fact that the Rio Grande was not navigable within the limits of New Mexico was conceded by counsel for the Government at the trial, although the Attorney General on the argument declined to make the same concession.* (R. 696.) There was apparently no evidence of any navigability whatever except in times of unusual flood, and then only for the purpose of floating rafts, logs, and poles. Consequently the court say: "Its use for any purpose of transportation has been and is exceptional and only in cases of temporary high water." The court therefore say they are not "disposed to question the conclusion reached by the trial court and the Supreme Court of the Territory."

Comparing this for a moment with the case at bar, we find that the navigation of the Desplaines was not exceptional and not confined to periods of

high water. It continued for 160 years and was carried on in the dry season of September as well as the high-water period in the spring. The difficulty experienced by the American Fur Company in getting their mackinaw boats through the channel from the Chicago River to Portage Lake in the early fall was obviously due to the fact that they were required to be built sufficiently large and of sufficiently heavy material to navigate not merely the Desplaines River but Lake Michigan throughout its entire length. A review of the uses of the river will also show its actual navigation at practically all times during the year, with the exception of the driest and most sultry seasons when substantial portages were required, and we note that the rapid trip taken by Governor Cass averaging 60 miles a day in a canoe containing 18 men in 1827 was accomplished in a very sultry July and without any portage even between the Desplaines and the Chicago. In a word, the Desplaines was navigated in low-water stages with difficulty by large boats, and in the other stages without difficulty even by heavy mackinaw boats, but as this court has said, navigability does not depend on the difficulties attending navigation.

Appellant also relies on *Leovy v. United States*, 177 U. S. 621, 637. In this case the trial court told the jury that if you could travel by water continuously from one State to another the water is navigable water of the United States (p. 632), and in criticizing this the court says: "The mere ca-

capacity to pass in a boat of any size, however small, from one stream or rivulet to another, the jury is informed is sufficient to constitute a navigable water of the United States," and held that definition to be too broad. The Government will have occasion to refer to this case again and point out that navigability was in no way in question, and that the sole question involved was that of actual navigation. Counsel in another part of his brief relies on *Donnelly v. United States*, 228 U. S. 708, 709, which was the decision of this court on a petition for rehearing. In its first opinion, 228 U. S. 260, the court had said that "there was evidence in the record tending to show that the stream was navigable in fact at certain seasons from Requa (near its mouth) up to and above the locus in quo." The court then assumed that that question was not important, and that it bore only on the question of title, and held that as the river had been, in effect, declared to be nonnavigable by the California Legislature, it must therefore be treated as nonnavigable in law. This position was assailed in a petition for rehearing, attention being called to other decisions of the Supreme Court of California holding that the enumerating of certain rivers as navigable did not prevent other rivers, navigable in fact, being also so considered, and the court therefore said that "Our position respecting the navigability of the Klamath River and State ownership of the bed thereof is so serious in its ulterior consequences that it ought not to be ad-

hered to without further argument," and state that, as the prior opinion points out, "there was evidence tending to show that the stream is navigable in fact from Requa (near its mouth) up to and above the locus in quo, but the evidence was by no means conclusive," and not sufficient to enable the court to take judicial notice of the stream as being navigable in fact, "especially in the face of a declaration by the legislature of the State that it was not navigable."

The court then say that the plaintiff failed to suggest that the navigability of the river should be considered as a question of fact. And at page 711 that "if the suggestion of excluding the river from the reservation on the ground that it was navigable was intended to be made the subject of exception at the trial, this point should have been clearly raised; and it was not * * *. The state of the record, therefore, did not entitle the plaintiff in error to call upon this court to decide the merits of the question of the navigability of the river and its affect upon the jurisdiction of the circuit court over the homicide." The court thereupon recalled its decision on the question of the navigability of the river and said "that matter, therefore, we leave undecided."

The effect of the decision is, of course, to hold that as the question of navigability was not made an issue of fact, the plaintiff in error was not entitled to raise the question for the first time in the Supreme Court and require it to hold that the

river was navigable on incidental evidence received at the trial, since the issue had not been raised and the Government had had no opportunity to offer countervailing proof.

We have called attention to the fact that the navigation of the Desplaines was not confined to high water, but it is abundantly established by the decisions that if a stream is navigable for a portion of the year for sufficient length of time to answer the purpose of a common highway, it is navigable, and its navigability is not destroyed because it can not be used in other stages of the water. The question is very learnedly and ably discussed in *Brown v. Chadbourne*, 31 Maine 9; *Morgan v. King*, 35 N. Y. 454; and *Moore v. Sanborn*, 2 Mich. 519, which have become leading cases on the subject and cited by Mr. Justice Davis with approval in *The Montello*, supra, at page 443. See also Cooley, J., in *Thunder Bay River Booming Company v. Speechly*, 31 Mich. 335, p. 342; *Hickok v. Hine*, 23 Ohio State 527.

The District Court very aptly remarks that "controversy here has really been as to the extent rather than the fact of navigation." We submit that the navigability of the river is clearly established by the testimony taken on behalf of the appellant even without reference to any testimony presented by the Government and is beyond controversy.

Counsel has assumed that the court applies a different test to navigability in the case of the

Northwest Territory from the test of navigability generally. Very obviously, however, it did not, for it ~~was~~^{has} that the acts of 1796 and 1804 did not create navigability, but defined rights dependent on its existence. The whole effect of those enactments, therefore, was to fix the character of the streams then being navigated as public highways and assure beyond any possibility of question the perpetual character of the public easement of navigation. We submit, however, that even in the absence of such statutes that where navigability exists of such a kind as to bring a river within jurisdiction of Congress, the public easement arising from that fact can never be lost either by changed conditions, depletion, artificial impediment, changes in the mode of navigation, or other causes.

As already stated, the Desplaines was and had been navigated for over a century and a quarter by the means ordinarily employed in lake or river navigation at the time the enactments referred to were passed, and these enactments, as well as the provision of the ordinance of 1787 declaring the navigable waters leading into the Mississippi and St. Lawrence to be common highways, show that the navigability of these rivers then being used in interstate commerce was in the eyes of the legislators a matter of large and national importance and necessary to be preserved.

While the point is not involved here it may be proper to suggest that even if the stretch of the Desplaines in question had been "substantially

unnavigable without the artificial aid of canals " the fact that it served as a connection between the obviously navigable waters of Lake Michigan and the Illinois would in itself have rendered it a navigable water of the United States and within the protection of Congress. (*United States v. Chandler-Dunbar Company*, 229 U. S. 53, 66.)

II.

Where a stream is navigable in a state of nature, the power of Congress to protect and promote its navigability can not be destroyed by nonuser or artificial depletion.

There is an abundance of evidence furnished by the engineering experts, and in part based on gauge readings kept for a period of over twenty years, to show that in spite of depletions caused by deforestation, habitation, etc., the Desplaines remained navigable in fact, but it is submitted that neither depletion nor artificial impediments to navigability can destroy the public easement of navigation in a stream actually navigable and navigated in the state of nature. (*People v. Page*, 56 N. Y. 834.)

III.

The Government has never contended, nor did the court of appeals or the district court hold, that the acts of 1796 and 1804 created navigability; their effect is to define rights dependent on the existence of navigability.

The Government has never contended that the acts of 1796 and 1804 governing the disposition

of lands of the United States created navigability, but submits that the provision therein contained that "all navigable waters within the territory to be disposed of by virtue of this act shall be deemed to be and remain public highways" were enacted to make it certain beyond all controversy that the lands over which those navigable rivers flowed were subject to a perpetual easement of navigation in favor of the public. As already stated, the Government contends that where navigability exists of such a kind as to bring a stream within the jurisdiction of Congress, the public easement arising from that fact can never be lost either by changed conditions, depletion, artificial impediments, or other causes, and this quite apart from any statute on the subject. But in connection with these statutes, it further submits that were this otherwise and were it possible for any facts or circumstances to destroy, in the ordinary case, the easement of navigation, the specific provisions in these acts of Congress that the navigable rivers within the territory to be disposed of by virtue of the enactments "shall be deemed to be and remain public highways" would of its own force and effect create an indestructible public easement impossible to be lost.

The evidence already referred to abundantly established, and the courts found that the Desplaines River was a navigable stream, actually being navigated at the time of these enactments, and it necessarily follows that they are within their

scope, and that there exists over them a perpetual right of public navigation. The contention that these acts lost their force when Illinois became a State ignores the fact that at the time they were enacted the Government was the sovereign proprietor of the entire territory to be disposed of, and, in addition, Congress had not alone the powers of a sovereign proprietor, particularly those granted by the Fourth Article of the Constitution, but was, of course, in the full exercise of every constitutional power including its indubitable power to protect and preserve navigability of rivers; in these circumstances it took advantage of the situation by making the perpetual character of the easement of navigation over the then navigable rivers certain and assured beyond any possibility of doubt or question.

The Government has no doubt that in the absence of this legislation, the easement of navigation would have been indestructible, but it submits that the enactments in question put that matter beyond debate and were intended to do so.

That such enactments continue in force after a territory is organized as a state would not seem to require the citation of authorities, but we venture to refer to *Coyle v. Oklahoma*, 221 U. S. 559, where the court said at page 574:

It may well happen that Congress should embrace in an enactment introducing a new State into the Union legislation intended as a regulation of commerce among the States,

or with Indian tribes situated within the limits of such new State, or regulations touching the sole care and disposition of the public lands or reservations therein, which might be upheld as legislation within the sphere of the plain power of Congress.

The court then say, "such legislation would not derive its force from agreement or compact, but from the power of Congress over the subject." This was quoted with approval in *United States v. Sandoval*, 231 U. S. 28, at page 38.

The case is also obviously within the principles laid down in *Ruddy v. Rossi*, 248 U. S. 104, although apparently not within the doubt expressed by Mr. Justice Holmes. Unquestionably Congress could have reserved out of the territory a strip for the use of a public highway for purposes of interstate commerce or an easement over such a strip, and likewise it undoubtedly had power to make perpetual an easement of navigation over a public navigable water running through territory of which it was the sovereign proprietor and in the exercise of its other constitutional powers.

As the question of whether the ordinance of 1787 is still in force or has any legislative validity is, in view of the enactments referred to, of no importance here, the Government only suggests that while there is some dicta on the subject, the question has not been foreclosed and may well await a case in which it is vital to some decision. The provision of the ordinance, however, that "the

navigable waters leading into the Mississippi and St. Lawrence and the carrying places between the same shall be common highways and forever free as well to the inhabitants of said territory as to the citizens of the United States, etc.," is of importance, however, as showing that in the opinion of the Virginia Commissioners and the Continental Congress those rivers, although they might at places be impassable, had a vital relation to interstate commerce and to the national welfare, an opinion evidently shared by the Federal Congress which passed the acts already referred to. In the language of this court in *The Montello*, supra, "to preserve the national character of all the rivers leading into the Mississippi and St. Lawrence and to prevent a monopoly of their waters was the purpose of the ordinance of 1787."

IV.

The act of March 3, 1899, is an act for the protection of navigability and prevents impediments even in the absence of actual navigation.

On this point the Court of Appeals said, at page 799, "We think streams of actual navigable capacity but not now used for interstate commerce are within congressional power to preserve for purposes of transportation, and that the act of 1899 applies to such streams. If this is not the proper construction, very few interstate streams are within its terms." After referring to the manner in which great water routes could otherwise be de-

stroyed with the permission of the State, the court say, "Hundreds of like streams immensely important to the future welfare of the country on this theory could never come within the reach of congressional power except possibly through restoration by the States. We are unwilling to assent to this narrow view of the purpose of the act of 1899 and think it should be construed to refer to navigable capacity (which is the test of navigable water), and not rigidly restricted to streams floating interstate or foreign commerce at the time of its passage." In opposition appellant relies on two cases; the first is *United States v. Rio Grande Irrigation Company*, 174 U. S. 690, page 709, but in that case the court in reference to this act say, at page 690:

The language is general and must be given full scope. It is not a prohibition of any obstruction to the navigation but any obstruction to the navigable capacity and anything whereof done or however done within the limits of the jurisdiction of the United States which tends to destroy the navigable capacity of one of the navigable waters of the United States is within the terms of the prohibition.

The language quoted by counsel for appellant is used with reference to the special circumstances of the case which were that an appropriation was being made of the upper waters of a navigable stream where it was not navigable and the court say that the question is one of fact "whether

such an appropriation substantially interferes with a navigable capacity within the limits where navigation is a recognized fact." The remanding order directs an inquiry as to whether the appropriation would "substantially diminish navigability of that stream within the limits of present navigability." *Leovy v. United States*, 177 U. S. 621, relied on by appellant has no bearing on this case as the act there involved was the act of 1890 prohibiting obstruction of navigation and the indictment was an indictment for obstructing navigation and not navigability. On the other hand this court in *United States v. Chandler-Dunbar Company*, 229 U. S. 53, applied this act in the removal of dams in a portion of St. Mary's River which in its then condition was not merely not navigated but impossible of navigation.

According to counsel's contention, the existence of obstructions to navigation of an otherwise perfectly navigable stream not only takes it out of the protection of the act of 1899 and permits further and unlimited obstructions without the consent of the Government, but places the stream beyond the control of Congress.

V.

As neither Congress nor the Illinois Legislature has consented or given authority for the building of the dam in question it is within the inhibition of the statute.

The statute specifically requires the consent of Congress or authority from the legislature before

an obstruction to navigability can be placed in a navigable stream. The question of navigability is one for the decision of this court, and when decided in the affirmative the question arises, "Is the obstruction prohibited by the terms of the act in question." If the navigable portions of the stream extend beyond the limits of the State, then the consent of Congress must be obtained. If they lie wholly within its limits, "structures may be built under the authority of the legislature" of the State. But any construction of a dam in navigable waters is absolutely prohibited unless there be "the consent of Congress" or the "authority of the legislature." The record in this case shows not only absence of authority on the part of the legislature, but an act approved December 6, 1907, specifically declaring the Desplaines and Illinois Rivers to be navigable streams and making it unlawful to construct any obstruction to their navigability and providing for the removal of obstructions then existing. In support of the point suggested, it is only necessary to refer to *Cummings v. Chicago*, 18 U. S. 410; *Montgomery v. Portland*, 190 U. S. 1. These cases likewise sustain the point that even if the plans had been actually approved by the Chief of Engineers and the Secretary of War, any attempted construction of the dam would have been unlawful and prohibited by the statute.

It was within the paramount authority of Congress over navigable rivers to impose any condition precedent to the building of a dam which it might deem necessary. It chose, in this present class of cases, to require authority from the State legislature. As that authority has not been obtained, the dam is prohibited.

VI.

The fact that the plans for the dam have never been approved by the Chief of Engineers and by the Secretary of War likewise brings this proposed structure within the inhibition of the statute.

In support of this point it is only necessary to refer to the terms of the statute itself.

VII.

Were it possible for the navigability of the stream to be lost, which the Government denies, and had the Desplaines ever ceased to be navigable, which is also denied, the navigability of the stream in a state of nature brought it directly within the protection of the acts of 1796 and 1804, and its augmented navigability would bring it within the terms of the act of 1899; there could be no claim that the act so applied would be unconstitutional or affect vested rights since the riparian owner under the acts in question holds its title subject to a perpetual public easement.

The practical situation with reference to the portion of the Desplaines in question is that at the time the land acts of 1796 and 1804 were passed, it was a navigable water of the United States

actually being navigated for purposes of useful interstate commerce, and by the terms of the acts, it was declared to be a permanent public highway over which the public easement was, of course, paramount. When appellant attempted to put its dam in the river, the flow had been increased by 300,000 cubic feet of water per minute, and there was flowing through the channel a volume of water abundantly ample for purposes of navigation. It was, therefore, navigable water in fact flowing through a channel made a public highway and completely within the terms of the statute quite a part from the question of the former volume. Appellant has insisted that a construction of the statute which would include such a stream would render it unconstitutional presumably as a taking of riparian rights without compensation. As the Desplaines, however, was, in terms, made a public highway, there can be no question of private rights or the constitutionality of the act of 1899 when applied to it.

While making the foregoing statement, we firmly adhere to the original ground taken that, irrespective of the land acts, as the Desplaines was navigable in a state of nature and useful for purposes of interstate commerce by the means formerly employed, its character as a navigable water of the United States could in no possible way be lost or destroyed.

VIII.

While firmly resting its case on the natural navigability of the Desplaines the Government submits that had it not been navigable in a state of nature, the navigability resulting from the addition of the waters of Lake Michigan would have brought it directly within the control of Congress and the terms of the act of March 3, 1899, without reference to the early acts.

The power of Congress to protect the navigability of waters useful in interstate commerce depends upon its possession of great constitutional powers such as the power to regulate interstate commerce.

The Government submits that in view of the record in this case showing natural navigability and actual navigation, the question of the Government's power to protect artificial navigability resulting from changes in volume does not arise but it feels itself unable to pass over or silently accept the suggestion that such a power does not exist, although a decision of the question may well be left to a case in which it is vital. In support of the suggestion, however, attention is called to *ex parte Boyer*, 109 U. S. 629, where it was held that a canal, although wholly artificial and wholly within the State, and subject to its ownership and control, was navigable water and "public water of the United States and within the legitimate scope" of its constitutional and admiralty jurisdiction. (R. 631.) The court further say that the case does not raise the question of canals used only

in intrastate business. In other words, the court distinctly place the Government's control over the canal on the ground of its being an instrumentality of interstate commerce. In *The Robert W. Parsons*, 191 U. S. 17, the court also held such a canal to be a navigable water of the United States and subject to the exclusive jurisdiction of the Federal courts. Also there is a statement in point in *Monongahela Navigation Company v. The United States*, 148 U. S. 312, where the court say, at page 342:

But the power of Congress is not determined by the character of the highway. Nowhere in the Constitution is there given power in terms over highways unless it be in that clause to establish post offices and post roads. The power which Congress possesses in respect to this taking of property springs from the grant of power to regulate commerce, and the regulation of commerce implies as much control, as far-reaching power over an artificial, as over a natural highway. They are simply the means and instrumentalities of commerce, and the power of Congress to regulate commerce carries with it power over all the means and instrumentalities by which commerce is carried on.

It may be suggested here that where the court have used the words "in its natural condition" or "ordinary condition" it has used the words "natural" and "ordinary" to indicate a usual or periodic state of the water as distinguished

from unusual floods and not as distinguished from a volume due to artificial but permanent changes.

United States v. Cress, 243 U. S. 316, supports rather than denies this contention.* The effect of that decision was that Congress could not destroy the value of a mill and mill site on a nonnavigable creek without making compensation, but the court say at page 325 that they make no doubt that on the completion of the improvements the enlarged channels remain navigable waters of the United States for all purposes of Federal jurisdiction and regulation "notwithstanding the artificial character of the improvements; *Ex parte Boyer*, 109 U. S. 629, 632. *The Robert W. Parsons*, 191 U. S. 17, 28." These cases, we think, are authority for the proposition that any stream which has become navigable is subject to the power of Congress to protect that navigability.

Moreover the waters of Lake Michigan are public navigable waters and when diverted to a different channel, do not lose their public character and become private waters.

From what source does appellant obtain power to impound and control public waters of the United States turned into the channel of the Desplaines with the consent of the Government in aid of sanitation and commerce?

IX.

The War Department never in any way "assured appellant's predecessor that the Desplaines River was not a navigable stream," nor did it take any official action in regard to appellant's plans.

It has already been suggested that in view of the failure of the Illinois Legislature to authorize

* *Refers to position stated under, VII*

the construction of the dam and its affirmative action in prohibiting any obstruction in the river, it was necessarily impossible for the War Department by any action to authorize the construction of the dam here proposed.

Cummings v. Chicago, supra.

Montgomery v. Portland, supra.

Moreover, the naïve suggestion of counsel that in some way the War Department assured appellant's predecessor that the Desplaines was not navigable is sufficiently answered by a reference to the Government's opening part of its statement of facts. It will be noted that appellant's predecessor aimed at exploiting a water power created by the expenditure of about \$63,000,000, raised by public taxation, and that when he set about to do so the water of the Desplaines had already been augmented by 300,000 cubic feet of water, turned in from Lake Michigan, while he himself had no interest of any kind as a riparian owner or otherwise, and the riparian owner from whom he subsequently took title had an interest only in the left bank of the stream. It is not necessary to discuss the transactions by which he possessed himself of the right bank of the stream then held by the Illinois-Michigan Canal Commissioners, nor discuss their conduct in making the transfer of the rights involved for a purely nominal consideration, when the development of the water power was obviously so essential and necessary

a part of the plan of the State and Nation to extend the Sanitary and Ship Canal and thereby complete deep waterway navigation from the Lakes to the Gulf. These acts, however, illuminate the subsequent activities of the appellant's predecessor in attempting to obtain some favorable action on the part of the War Department.

It is enough to say that Mr. Munroe approached the local engineer in Chicago, assuring him and insisting at every step that the Desplaines River was not a navigable stream. A reading of the letters of the Government officials shows that he did not ask Col. Bixby for light on that subject, but informed Col. Bixby that it was not navigable and that it was not necessary to ask the Government for any permission or authority of any kind. (Appellant has not put in evidence his letter to which the local engineer's letter referred and to which the letter of the Assistant Secretary was a reply.) They merely wished, as Col. Bixby says, to be assured that their plans were in harmony with the general plans reported by the Ernst Board. Col. Bixby recommended that if certain provisos were accepted by Mr. Munroe that he and Congressman Snapp "be informed that the War Department will waive any and all objections which it may have to the progress of such water-power dam construction." It was, in short, an attempt on the part of Mr. Munroe to get his plans approved on his representation that the river was a nonnavigable stream, and what Col. Bixby would be will-

ing to recommend upon such a representation is no index at all to what he would have been willing to do with the understanding that the stream was navigable. He was himself in no way authorized to pass upon the question of the stream's navigability. He merely said, I understand that the Government has no power in the premises; I therefore think it would be desirable for the Government to agree to waive any objection if Mr. Munroe will agree to certain things on his part. The Assistant Secretary of War responded by informing Mr. Munroe that while the work proposed appeared to be in general harmony with the improvement recommended by the Board of Engineers he was obliged to say that, as Congress had not authorized the improvement, the department "does not deem it expedient to take further and definite action in the matter of approving the plans."

Again, when appellant was informally in the Office of the Secretary of War, it informed him that the company sought no permit from the Government and declared that the Desplaines was not a navigable stream. When the Secretary asked Gen. McKenzie where the department got any jurisdiction, Mr. Snapp answered: "Let me answer, Mr. Secretary, as a lawyer; you undoubtedly have none." He went on to declare that the stream was not navigable and that they sought no permission, and the public had no rights in nonnavigable waters. The Secretary then said

that what had been done in the department was extra official beyond the authority of the Chief of Engineers, something done out of kindness of his heart.

Gen. McKenzie, testifying afterwards, said that what was said with reference to nonnavigability was based principally on the presentation made by Mr. Snapp and the fact that the Secretary did not have to decide whether it was navigable or not. After reading the record on this subject, counsel's contention that the War Department assured appellant's predecessor that the stream was nonnavigable has some elements of humor.

We note that when in October of 1907 the Illinois attorney general asked the War Department whether the Desplaines was a navigable stream, the Secretary, apparently after examining the question, answered that it was, and doubtless if Mr. Munroe had asked it the same question he would have received the same reply.

X.

No action of the War Department, even of the most formal kind, could estop the United States from asserting and protecting the navigability of a stream and from removing or preventing an obstruction to its navigability and without compensation.

The principle is well established that the power to protect navigation is illimitable and that the Government of the United States is not estopped by the action of its officials or by prior congress-

sional action. The power to prevent obstructions and promote navigation is a continuing power not exhausted by one exercise, but a sovereign power analogous in its illimitable exertion to the police power. Some of the cases sustaining this doctrine are referred to under Point X, *supra*.

However, no official action of any kind was here taken by the War Department, except to inform the State of Illinois that the river was a non-navigable stream.

The facts already referred to dispose of counsel's contention that the purpose of the act requiring approval of the plans had been complied with.

When the Chief of Engineers is asked to approve plans for a dam in a navigable stream, he is asked to act officially and perform a duty imposed by the act of 1899, and he approves or disapproves of the plans in their relation to the question of whether they will or will not interfere with navigation. In the present case the representation made by appellant was that the stream was not navigable and the Government had no power in the matter. He was, therefore, not asked to exert the authority conferred on him by the act in question, and, as the Secretary of War himself says, any action taken was extra official; and it is also noted that the Assistant Secretary of War in turn declined "to take further and definite action in the matter of approving the plans."

XI.

This court has never passed on the merits in the present controversy in any of its phases, but has expressly declined so to do.

Counsel maintains that this court has intimated that the acts of the War Department should prevent interference with the construction of the work. We submit, nothing could be more far-fetched.

In the case referred, *Illinois v. Economy Light*, etc., 234 U. S. 497, the court declined to take jurisdiction, on the ground that the issue between the State and the Company as to whether or not the river were navigable was a question of fact not reviewable on appeal from the State court. The State, however, presented an ingenious theory that the United States Government had undertaken the improvement of the river, and therefore the State was entitled to assert "on behalf of the citizens of all of the United States the right to prevent interferences with that improvement." Without passing on this very unusual claim, this court pointed out that the appropriations were not for improvements undertaken but for improvements which might be undertaken—not a jurisdiction exercised but a jurisdiction that might be exercised—and called attention to the fact that the War Department had on that account refused to take action in the matter of approving the plans, and said: "It is manifest, therefore, that the State has

no right under Federal laws which it may assert for itself or 'on behalf of the citizens of all of the United States and the motion to dismiss must be granted.'" (R. 524.)

The effect of the decision is that the State could not ask this court to review the question of navigability decided adversely to it in the Illinois Supreme Court, nor could it, even if such a thing were possible, assert a right on behalf of the citizens of all of the United States, based on a Federal improvement undertaken which was being interfered with by the defendant in error first, because "the State is not the instrument through which the jurisdiction can be exercised," and, second, for the reason that the Government had not in fact undertaken the improvement, and consequently there was no right under the acts of 1889, 1900, and 1902 which the State court assert "on behalf of the citizens of all of the United States," if such a thing were possible.

XII.

Under point XI counsel for appellant has contended that the portion of the Desplaines is question can not be navigable water of the United States and does not connect with any other body of water so as to make it usable in interstate commerce.

A complete answer to that suggestion is found in a reference to the evidence, showing navigation throughout the entire length of the Desplaines from Riverside to the Mississippi in connection with Lake Michigan, and the navigation carried

on between Mackinaw and the lower reaches of the Illinois River. The evidence sustaining the navigability of this reach of the Desplaines likewise sustains the navigability of the upper Illinois with which it connects, and not only does it connect with the Desplaines above Joliet, which was navigable in the state of nature, but also the Illinois-Michigan Canal which connects with Lake Michigan and the Sanitary and Ship Canal which presents deep waterway navigation between Lake Michigan and its connection with the Desplaines.

Incidentally counsel contends that the Sanitary and Ship Canal is not a waterway of the United States. He, himself, quotes from section 24 of the act of May 29, 1889, which provided, that when the channel was completed "and the water turned therein to the amount of 300,000 cubic feet per minute, the same is hereby declared a navigable stream."

As the evidence shows that the flow of water varies between 250,000 and 360,000 cubic feet per minute, it has become, by the terms of the act of the legislature itself, a navigable stream. It further provides "and when the general Government shall improve the Illinois and Desplaines Rivers for navigation to connect with this channel, said general Government shall have full control over the same for navigation purposes, but not to interfere with its control for sanitary or drainage purposes." So far as this latter provision is restrictive, it can have no effect, since the jurisdiction of

Congress and of courts of admiralty over navigable waters arises from the paramount powers conferred by the Federal Constitution and does not lie in the grant of the State Legislature. *Ex parte Boyer*, supra, and other cases cited.

It has already been noted that the concurrent joint resolution accompanying this act stated that it was the purpose of the legislature to provide a ship canal from Chicago to the Mississippi River and asked the cooperation of the General Government in the construction of the channel from Joliet to the Mississippi. Not only is the character of the Sanitary and Ship Canal as a public highway established by these acts, but by its obviously navigable capacity, but this court would naturally, we think, take judicial notice of the fact that it has been actually navigated for the last nineteen years, that the Sanitary District has maintained and operated locks for the passage of the boats, advertised the advantages of water transportation in connection with the sale of lands which it was obliged to acquire by condemnation, that for years a passenger packet has navigated between Joliet and Chicago, and that in every conceivable way its character as a navigable stream has been completely established.

From all of this it is clear that not only was the portion of the Desplaines in question a part of the Chicago-Desplaines, Illinois, route used for interstate and foreign commerce through the period of 160 years, but it is now the connecting

link between the Illinois on the south and three navigable means of reaching Lake Michigan from Joliet on the north.

XIII.

The power of Congress over navigable streams does not rest alone on its power to regulate interstate and foreign commerce, but finds support also as an incident to the power to make war, to raise and support armies, and other like general powers.

In this connection, the Court of Appeals said: "It is urged that the act of 1899 was passed under the constitutional power to preserve interstate commerce, and as no such commerce on the Desplaines then existed, the statutes can have no effect, and that if the statute be construed to reach beyond this, it was to that extent beyond the legislative power. Even so, it might be regarded under the war power. We have already had a significant reminder of the inadequacy of railroad transportation in a time of stress."

As one of the primary purposes named in the preamble of the Constitution is to provide for the common defense, it seems impossible to say that the great powers to make war and raise armies given Congress in aid of that primary purpose, do not include the power to protect the navigability of the rivers and navigable waters of the United States; and this quite apart from, and independent of, the existence of a power to regulate interstate commerce. The importance of public waters to the common defense needs no argument, and that their relation to that purpose has always been

assumed is shown by the fact that from the beginning they were placed under the jurisdiction of the War Department. Their usefulness in aid of transportation continues when roads and railroads are destroyed, or are pressed beyond their capacity. To assume that navigable streams have no national importance except for purely commercial purposes, and are not within any of the powers of Congress except the power to regulate interstate commerce, is to ignore the great purposes for which our Constitution was ordained and established.

CONCLUSION.

The national importance of the Desplaines as a means of interstate commerce was recognized by the distinguished commissioners of the State of Virginia and the Continental Congress of the United States in the declaration that the navigable waters leading in the Mississippi "shall be common highways and forever free to the inhabitants of the territory and the citizens of the United States;" since it was one of the three great avenues from the St. Lawrence to the Mississippi referred to by Mr. Justice Davis in *The Montello*, supra.

The Federal Congress likewise recognized the importance of these waterways by their declaration in early enactments that they should be and remain public highways.

The river had a great, continuous, and prosperous navigation from the time of its early discovery by

the French in the latter part of the seventeenth century until its navigation was impeded by the construction of numerous dams at the end of the first third of the nineteenth century, and superseded by the superior means supplied by the Illinois and Michigan Canal.

Eight reports of Government engineers, however, declare that the portion of the river here in question is the most natural and available channel for a deep waterway connection between the Sanitary and Ship Canal and the Mississippi River, a project for completing the inland deep waterway connection between the Gulf of St. Lawrence and the Gulf of Mexico, which has been tenaciously adhered to by the Government of the United States and the State of Illinois for nearly a century.

The State of Illinois has spent over \$63,000,000 for the dual purpose, as declared in the resolution of its legislature in 1889, of furnishing sanitary drainage and constructing a link in the projected ship canal. It has completed the ship canal as far as Joliet, where it joins with the portion of Desplaines in question.

The State of Illinois has appropriated \$20,000,000 for the extension of the waterway through the strip in question and down to La Salle. The water power in question had no value prior to the expenditures by the State, but appellant, who had no ownership of the land until six years after the waters of Lake Michigan had been turned into the river, insists that the improvement carried out

shall insure solely to its benefit and the benefit of other riparian owners.

It contends that if not permitted to control the situation and allowed to proceed without legislative authority and without applying to the Government for permission the public will probably "lose the greatest benefits which nature has placed within their reach for years to come."

The answer to that contention is that, as decided in *United States v. Chandler-Dunbar Co.*, 229 U. S. 53, the manner in which water power on a navigable stream shall be developed and controlled is within the power of the Government of the United States; also the answer to the contention that the erection of a dam would be in aid of the Government's plans and in the interest of navigation, the language of the court, quoting from a former decision at page 73, is pertinent here:

But if in the erection of a public dam for a recognized public purpose there is necessarily produced a surplus of water, which may properly be used for manufacturing purposes, there is no sound reason why the State may not retain to itself the power of controlling or disposing of such water as an incident of its right to make such improvement. Indeed, it might become very necessary to retain the disposition of it in its own hands, in order to preserve at all times a sufficient supply for the purposes of navigation. If the riparian owners were allowed to tap the pond at different places and draw

off the water for their own use, serious consequences might arise, not only in connection with the public demand for the purposes of navigation, but between the riparian owners themselves, as to the proper proportion each was entitled to draw.

The importance of the Chicago-Desplaines-Illinois route, navigated as it was for over a century and a half as a connection between the Mississippi and the Great Lakes, and forming with them the greatest inland waterway in all the world, is sufficiently evident from the record here presented; and it is evident that the activities of the appellant have delayed the completion of deep waterway navigation for a period of at least eleven years. The increased cost of the improvement of this navigation due to this delay need not be dwelt on.

It is respectfully submitted that the navigable character of the water in question amply appears, that there is no error in the record, and the judgment of the Court of Appeals should be affirmed.

CLARENCE N. GOODWIN,

Special Assistant to the Attorney General.

WILLIAM L. FRIERSON,

Solicitor General.

NOVEMBER, 1920.

APPENDIX.

GOVERNMENT PLANS FOR WATERWAY IMPROVEMENTS.

By M. L. Feiser.

Development of inland water transportation through the Council of National Defense's committee on inland waterways, which is receiving the fullest cooperation of the war department's board of engineers for rivers and harbors and of the department of commerce, opens to commercial power boats a field, the extent of which no one dares guess. This development is being brought about by the tremendous amount of inland shipping that is swamping the railroads and such river craft as have taken advantage of the opportunity.

Railroads, by one means or another, have done all they could in the past to stifle inland water traffic until it fell away off, but now they find themselves unable to cope with the transportation demands brought about by war, particularly that of the freight traffic, and have, by this admission, practically appealed for help. With the demand coming from many European nations for railroad equipment and the railroads of this country making the same appeal, plants devoted to supplying these needs find themselves with really more than they can do.

REDFIELD TOURING SOUTHERN WATERS.

This leaves but one course open, and the Government, forced by the war to recognition of the actual state of affairs, has turned part of its attention to utilization of inland waters and the craft that ply them. That is why the department of commerce has sent Walker Parker, secretary of the New Orleans Association of Commerce, as a special assistant to Secretary Redfield on a special tour of lower Mississippi River and its tributaries to study the transportation needs of those waters.

But long before Mr. Parker will be ready to make a complete report much information will have been added to the data United States Army engineers are already compiling. Mr. Parker is collaborating with the defense council's inland water committee, of which Brig. Gen. William M. Black, Chief of Engineers, is chairman and Col. Charles Keller, secretary, but the situation has been grasped by the Army engineers and already they have made much progress to show what must be done to solve the transportation problem.

Our plans for the development of these waterways do not include actual details as to power boats, but they do include details which should make the small commercial craft very vital to the whole scheme, Colonel Keller says. "Impetus given the movement to increase inland water traffic will naturally offer the development of power boats. We already know, and will find conclusively, that river boats, particularly of the large, freight-handling type, can make

none but economical stops along a given river route. This plan leaves out many smaller points, and many small streams, which still must be served. The only way to reach these is by power craft which will convey freight to the nearest large wharving point, transfer its cargo and pick up other freight destined for its home docks. Such a scheme will have to be followed for proper utilization of our rivers.

GOVERNMENT INVESTIGATING CONDITIONS.

Colonel Keller said the committee is already investigating such inland water routes as the New York State barge canal system, the Atlantic intercoastal system, and the Mississippi and Ohio Rivers. The committee is trying to find how much and by what means transportation is now being carried on on these waters, the amount of the floating plant, and what conditions work for or militate against further development. It is also trying to find what advantages this transportation offers shippers, what water carries are idle now and their number, capacity, description and availability for future use.

OPPORTUNITY FOR SMALL POWER BOATS.

Small craft, particularly commercial power boats, have the opportunity of now going ahead on their own initiative and creating actual needs for larger river vessels and more adequate service, Colonel Keller intimated. However railroads may have treated water transportation in the past, they are lending a hand here now, Colonel Keller says, because, he stated, Daniel Willard, who is

in charge of the transportation division of the advisory commission of the Council of National Defense, has seen to it that the railroads cooperate in moving river traffic.

As Colonel Keller says, there is much that must be done and power boats have the opportunity to do much of it. General Black and Colonel Keller are willing and anxious to do what they can to aid anyone looking to the solution of the inland water transportation problem, and can be reached at Room 122, War Department, State, War and Navy Building, Washington, D. C., headquarters of the committee. Since organization of the committee, as published in August Power Boating, R. A. C. Smith, dock commissioner of New York City, has been added.

(Power Boating, September, 1917, p. 51.)

The Honorable Joseph E. Randsdell, of Louisiana in addressing the Senate September 29, 1917, on the use of waterways a war necessity, said:

In the official report on "Transportation by Water," published by the Census Bureau for 1906, attention is called to the fact there were a very large number of small boats regularly employed and carrying in the aggregate a large and increasing traffic for which no statistics were gathered. *Every one in the least familiar with the facts knows that the number of motor boats now in use is enormously greater than in 1906. I have been told that there are more than 1,000 on one waterway in my own State of Louisiana—the Bayou Terrebonne.* Besides those who carry freight as a business there are large numbers of farmers who use motor boats to carry their produce to market and bring home their supplies.

In short, Mr. President, the water roads are being used in the same ways as the wagon roads; every one knows that the traffic in both cases is very large, but it is a practical impossibility to get a statement of the amount. It will be seen, therefore, that the duplications in these tables are largely, if not entirely, offset by the unavoidable omissions, making the totals approximately correct.

It is entirely natural, I suppose, that our attention should be attracted to the traffic handled in the great ports and on the great waterways of the country, but we must not overlook the fact that the smaller waterways and harbors, which are scattered all over our vast territory, and which, therefore, contribute to the development and prosperity of every part of the United States, carry a traffic which in the aggregate is enormous, both in volume and in value. It is shown by the tables, which I have asked permission to insert in the record, that there are 289 waterways and harbors which in 1915 carried less than 100,000 tons each, and that the total amount of freight was 8,316,820 tons, valued at \$252,968,679. What these figures really mean will be more clearly understood when I say that they are practically equal to the combined tonnage handled by Portland, Me., New Bedford and Fall River, Mass., and New London and New Haven, Conn., and to the aggregate value of the commerce of the six lake cities of Ashland, Marquette, Milwaukee, Toledo, Sandusky, and Conneaut.

And in closing he said:

Transportation is important in time of peace; it is absolutely vital in time of war.

Indeed, Secretary Baker says, and truly, "This is a war of transportation." Because our railroads are overtaxed it may depend upon our waterways whether our flag shall float in victory or go down in disaster and defeat. It follows, therefore, that every one who promotes the improvement, maintenance, and utilization of our waterways is helping to win the war, while one who takes the other course is imperiling the safety of the Nation and the future of civilization.

Bulletin of the U. S. Department of Agriculture
No. 74.

Contributed by the Bureau of Crop Estimates,
L. M. Estabrook, Chief, and by the Office of
Markets, C. J. Brand, Chief. December 19,
1914.

INLAND BOAT SERVICE: FREIGHT RATES ON FARM
PRODUCTS AND TIME OF TRANSIT ON INLAND
WATERWAYS IN THE UNITED STATES.

[By Frank Andrews, Chief, Division of Crop Records.]

RELATIVE IMPORTANCE OF RIVER TRAFFIC.

The relative importance of receipts by river as compared with the total receipts by rail and water of various farm products at leading river ports is shown in Table 1. A considerable fraction of the wheat and corn received at Baltimore, Md.; comes from landings along rivers which are tributary to Chesapeake Bay and is carried partly by steamboats and partly by sail vessels. During the five years ending with 1912 these receipts by water at Baltimore ranged from 10 to nearly 30 per cent of

the total receipts of wheat and from 3 to nearly 15 per cent of the total receipts of corn.

Cincinnati, Ohio, also has a large river trade in some products, notably tobacco.

One of the principal items in the freight received at St. Louis by boat is apples, which are brought in large quantities from Calhoun County, Ill. This county, consisting of a long strip of land bounded on three sides by the Mississippi and Illinois Rivers, has no railroads and depends upon river boats for transportation. In 1911, 54 per cent of the barreled apples received at St. Louis came by river, and in 1912 the river receipts exceeded 49 per cent of the total receipts by all routes. Also, from 2 to 5 per cent of the eggs, from 4 to nearly 7 per cent of the cotton, from 1½ to 2 per cent of the sheep, and from 2½ to 3½ per cent of the hogs received at the city in 1908-1912 came by water.

Statistics of river trade at Memphis and New Orleans show relatively large receipts of cotton. At Memphis during the five years ending with 1912 from 10 to nearly 14 per cent, and at New Orleans from nearly 4 to more than 7 per cent of all cotton received was carried by boat.

MARKET VALUES OF PRODUCTS TRANSPORTED BY BOAT.

Another basis of estimating the importance of steamboat traffic is the market value of products carried. The following approximate valuations are based upon average market prices at the respective cities where the produce was received, and are to be regarded merely as rough estimates. The wheat received by boat at Baltimore during

the five years ending with 1912, at average prices of southern wheat, contract grade, was worth from \$600,000 to \$2,000,000 a year, and the corn receipts ranged from about \$200,000 to \$1,000,000, according to the prices paid for southern white corn.

At Cincinnati the receipts of tobacco by river averaged from \$1,500,000 to more than \$3,000,000 a year in 1908-1912; the cattle, hogs, and sheep were worth, at average prices, about \$750,000 to \$1,250,000 per year, while the eggs brought in by boat averaged \$150,000 to \$250,000.

Among the receipts at St. Louis during 1908-1912 whose value illustrates the importance of river traffic are apples, with an average annual value (disregarding the abnormally low receipts of apples in 1910) of about \$125,000 to \$775,000; eggs, worth \$150,000 to \$200,000 a year; cattle, sheep, and hogs, \$1,500,000 to \$2,000,000; and wheat, \$200,000 to \$500,000.

The annual receipts of cotton by river averaged \$5,000,000 to \$7,500,000 at Memphis and \$3,000,000 to \$7,000,000 at New Orleans in the five years just mentioned. Large quantities of other farm products were also received by river at these two cities.

* * * * *

SOME ADVANTAGES OF RIVER OVER RAIL.

Since the river is a public highway, there is an opportunity for competition among carriers which does not exist with rail traffic. In railroad business the roadway and terminals are regularly under the same management as the trains which use them, so that competition between two or more

carriers over a single railroad is not to be expected. The fact that the river is a public highway makes it possible for persons of small capital to engage in transportation. Consequently sail vessels, *gasoline launches*, and small steamboats compete with larger boats for the traffic on many inland waterways. Sweet potatoes, watermelons, grain and other commodities are brought into Washington and Baltimore from points from 100 to 200 miles distant by means of *sail vessels and power boats*. A considerable part of the produce sold at New Orleans is brought there by small boats, and on the river system opening into San Francisco Bay *gasoline launches*, sailboats, and other small vessels also share with the regular steamboat lines in the carrying trade. *The opportunity offered to persons or companies of small capital to engage in transportation is one of the advantages of river over rail. These public waterways are used also by farmers to transport their produce to market.*

Another advantage of the river is the *economy* possible in a large part of the traffic, especially where relatively nonperishable articles are carried. *The capacity of a boat can be increased or diminished greatly by attaching or detaching barges, so that a large load can be moved at a relatively low cost.* In a large part of its business a boat can work much more cheaply than a railroad.

WITH THE BREAD WINNERS AT NEW ORLEANS.

REMARKABLE CHANGE IN RIVER COMMERCE SINCE GAS
ENGINES CAME—PADDLE-WHEEL STEAMERS GIVING
WAY TO GAS-PROPELLED TUNNEL BOATS—POWER
WORK BOATS BRING COST OF LIVING DOWN.

[By Ramon Jurado.]

The past year has seen a remarkable change in the type of power work boats in and around New Orleans. A decade or more ago, when the internal combustion engine began to replace the heavier and more costly steam plants in the smaller boats running from the Crescent City into interior Louisiana, Mississippi, Alabama, Arkansas, and eastern Texas, the stern-wheel packet idea persisted, and the gasoline freight or passenger-carrying boat was of the same type as the steamer it displaced. The heavy paddle wheel, shoving the boat ahead, crashed through the weeds of the inland bayous, or scraped over the bars of rivers and bays without more damage than a loosened wooden bar or two. The open propeller, on the other hand, entangled itself in a mass of vegetation, in the undeveloped bayous, or bent itself into useless curves and loops on the unexpected sand bars, and at low tide on the mud flats.

Then came the tunnel-stern boat, solving the water weed and the sandbar problem, and replacing, among the more progressive freighters and passenger-carriers, the stern-wheeler. A few of the old packet-like power boats remained and still ply their way to remotest settlements of the interior or to the fishing villages around the mouth of the Mississippi, but their lack of speed

and the difficulty of handling them have gradually driven almost all of the stern-wheelers from the field in favor of the screw-boats, as most of the old-time river men call the newer type of power craft. To-day the tunnel-stern combination boats, carrying freight on the lower deck and in the shallow hold and passengers on the upper deck, are being replaced by self-propelled barges to carry the freight and by craft closely approaching the cabin cruiser for the passenger trade.

Improvement of inland waterways has shown that the barge which carries its own motive power, though slower than the smaller power freighters, carries from three to ten times as much freight at approximately the same cost, and in some instances much less, than the combination boats. The barge also, being wider, longer, and of greater cargo space, draws less water than the more pretentious passenger-freight boats and, furthermore, requires at least one less in the number of the crew necessary to operate it.

These barges, which are being built to handle rice, sugar, lumber, and other commodities from remote inland points to shipside or railroad depot in New Orleans, are not sprung from the big steel barges which are being tried out on the Mississippi River in interstate trade nor to those small but similar craft which have made a success of carrying coal and iron from the Alabama fields to New Orleans. *The new barges are of wood, simply and cheaply built, some of them less than 50 feet in length, though plans for the most of those building and to be built call for craft of at least 100 feet long.*

BARGES OFFER SOLUTION OF CAR SHORTAGE.

Ungainly and far from beautiful, they depend for their existence on the development of inland waterways and the consequent necessity for cheap and capable freight transportation thereon. They appear to offer a reasonable solution for the car shortage and freight congestion problems which have done so much to retard the commerce of the lower Mississippi Valley during the past year.

Opening of inland waterways and the development of farming lands and settlements on their banks, likewise, has led to a demand from the people living in those sections for better transportation to and from their homes. Approximately 9,000,000 acres of fertile lands are being opened along the rivers, bayous, and canals of Louisiana this year; the people who are living on these lands are producing bumper crops and receiving top prices for them. If the condition of the roads is such that they can not have automobiles, and suitable train service does not reach them, they demand modern, convenient, and fast power-boat accommodations between their homes and the towns and cities they frequent on business or pleasure.

The result of this has been within the last year that a new class of passenger-carrying power boat has come into demand in this section of the South. The people no longer will ride on sacks of rice or sugar or above smelling piles of moss or palmetto fibre, nor will they loiter along good waterways at six or seven miles an hour when on the lake and river they see large passenger cruisers doing fifteen to eighteen. Hence the demand for

large cruisers, long and broad of beam but shallow of draught, which can bring one in eight hours from the mouth of the river to New Orleans or carry one across the lake at better speed than the lake steamers make.

These boats and the freight barges are bringing the agricultural territory of three States closer to New Orleans than anything else which has appeared since the introduction of the internal combustion engine, though, naturally enough, their success and growth depend on the development and improvement of inland waterways.

A TYPICAL MISSISSIPPI FREIGHT BARGE.

Of the freight barges a typical example is nearing completion for the Southern Transportation Co., in the yards of J. D. L. Mullen, on the Bayou St. John. This unwieldy appearing craft is 115 feet long, 29-foot beam, about 6 feet deep in the hold, *and draws 26 inches of water, loaded.* Her 44-inch propeller is driven by a Kenner 100-horse-power gasoline engine, and she will make six to seven miles an hour. Her capacity is *200 tons net*, and she is electrically lighted from a separate plant. She will be used for general cargo work on the river, Lake Ponchartrain, and the canals. *She is intended to be the first of a fleet of similar barges, of carrying sizes, for use in handling rice and sugar from the inland parishes to tidewater at New Orleans.*

Of the new passenger carriers, that type which provides quarters for the passengers above decks, with awnings for shelter, rather than the stuffy staterooms offered by the packet-type boats, is the

most in demand. This is an adaptation of the larger pleasure boat, of the type, for instance, of *Cavalier*, the 75 x 15-foot hunting and fishing boat belonging to Victor Camors, of New Orleans. The writer has seen her coming from the South Draw, across Lake Ponchartrain, a bitter northwester pounding her on the nose, yet never deviating from her 13-mile gait, with which she entered the draw and with which she had been coming up the Sound. For reasons of economy, these new passenger power craft, while planned along general lines similar to *Cavalier*, are being built in 50-60 foot lengths, with proportionate other measurements, and greatly reduced power plants, owing largely to the fact that most of their running is to be in quiet waters.

The low cost of operation of the self-driven barges on southern waters may be gathered from perusal of the data gathered by the Alabama and New Orleans Transportation Company, which has been operating six of these craft between the Alabama coal and iron fields and New Orleans for something like three years. While these barges are larger and more costly to operate than the smaller craft intended for inland waterways, a fair idea of what the cost of running the new-style wooden barges will be can be obtained by comparison. No figures, of course, are available as to the wooden barges intended for local operation.

The Alabama and New Orleans Company is operating six barges, three of them 200 feet long, 32-foot beam, and 8.5 feet deep; two 220 x 32 x 8.5 feet, and one 240 x 32 x 8.5 feet. Each of these barges is driven by two 75-horsepower Fairbanks-

Morse engines, using gas produced on board from breeze coke. These engines turn two 52-inch propellers on each barge, and drive as well a 5-kilowatt generator for searchlights, lighting, interior telephones, controls, etc. Cost of the coke for each barge is approximately \$25 a week of seven days. Each barge averages about 800 miles weekly, which brings the fuel cost down to a trifle more than 3 cents a mile. Labor cost per week is \$125 for each barge. The round trip from New Orleans to the Alabama coal fields is almost exactly 1,200 miles. The barges are always loaded coming in from Alabama, and carry good cargoes of merchandise on the return trips. The three smaller barges can handle 725 tons of coal each; the two larger, 825 tons, and the one 240-footer, 925 tons.

So successful have been the operation of these barges that the Inland Navigation Company, which has a larger self-propelled barge operating between New Orleans and St. Louis, on the Mississippi River, has ordered two steel barges of the 240-foot size of steel barges from the Alabama and New Orleans Transportation Company's yards at Violet, La. These new barges are being equipped with three Fairbanks-Morse oil engines, of the semi-Diesel type, each engine developing 100 horsepower. They will be completed in September and will be put immediately on the run between New Orleans and St. Louis, or possibly, more northern ports.

The wooden inland waterways barges, however, with their 100 or 200 ton capacities, and necessarily shallow draught of 2 feet or less, can not compare with these huge steel power boats, though it is prob-

able that they will develop a business which, in the aggregate tonnage and in aggregate assistance to the sections they visit, will be as great as, if not greater than, that afforded by the larger self-propelled craft.

Some of the old-time freight and passenger carriers, however, are still active, popular, and making money. Among these is El Rito, one of the largest gasoline workboats in New Orleans, which belongs to the Spicuzza Bros. Transportation Company, and carries passengers and general cargo into the Barataria section, bringing back rice and other products of the swamps. She is about 100 feet long and equipped with a 100-horsepower Fairbanks-Morse gasoline engine, with separate plant for electric lighting. Her upper deck is provided with staterooms for passengers, and the lower is left open for freight. El Rito was one of the first boats on the river to be operated by an internal combustion engine, and has been running steadily ever since she was first put into commission. Few inland waterways boats have made so much money for their owners as has this clumsy looking but reliable old-timer.

OIL-DRIVEN TUGS BECOMING POPULAR

Gasoline or oil-driven tugs also are becoming more and more popular in New Orleans harbor and on Lake Pontchartrain. One of the strongest and best known of these is Tiger, properly of the Jahneke Construction Company, which handles heavy barges of sand, schooners filled with clamshells, and other schooners laden with lumber, with equal facility. Tiger is 75 feet long, 15-foot beam, and draws about 4 feet of water. She is equipped

with a 75-horsepower Wolverine engine, and is considered one of the best, if not the best, power tug in the port.

The new patrol boat of the Southern Yacht Club also is built somewhat after the manner of a tug, and has much of the work of a tug to perform in towing disabled cruisers to safety, racing schooners, machine sloops, and other sailing craft to the starting lines of races, and various similar work about the clubhouse at West End. This patrol boat is 36 feet long over all, with a beam of 9 feet, and is driven by a 15-horsepower heavy-duty Sterling engine, giving a speed of about nine miles an hour.

One of the most important classes of work boats not only in New Orleans but all along the gulf coast is that which carries the fish, oysters, shrimp and other sea foods to the market. Their importance has increased enormously since the beginning of the war, because, by the aid of the gasoline engine, they are able to add largely to the food supply of all the gulf States, while they make so much faster and more frequent trips from the fishing grounds under power than they did in the old days under sail that prices of this class of food have risen very little in proportion to those of other necessities of life. Thus, the gasoline engine has been a big factor in keeping down the high cost of living in the further south.

BOATS CUT HIGH COST OF LIVING.

New types of these boats also are creeping into the annually-growing fishing industry of the South, types which tend to greater speed and strength of hull, so that the cargo carrier, instead

of having to wait at the mouth of some river or bayou for the oyster tengers or the shrimp seiners or the fishermen to bring in their catches, can go out to sea, gather up the cargo without disturbing the work of the harvesters of the deep and then make 12 to 15 miles an hour against wind or tide back to market.

Of such as these are two boats, exactly similar in every detail, which have just been completed by Frank Maternolich, at his shipyard at Wolf River, Miss., and whose engines were installed by Arthur Duvie, of New Orleans. One of these is North Star, built for Captain Bassao, of New Orleans, and the other New Champion, built for Mreo Sumich, also of New Orleans. A description of one will serve for both.

Length, 60 feet; beam, 18 feet; draft, 4 feet. Equipped with 40-horsepower Frisco Standard engine, make-and-break ignition, separate lighting plant. The propeller is 42 inches in diameter, and, at a working speed of 12 miles an hour, the power plant will consume five gallons of oil or gasoline an hour, the engine using either fuel. The boats are of the fan-tail type, heavily built for all weathers, and cost \$6,000 each. Their work will be carrying oysters, of which they have a capacity of 500 sacks—nearly 25 tons—from Louisiana Marsh to New Orleans, a distance of 110 miles.

Four men operate each boat, which must make two round trips between New Orleans and the marsh, each week. Thus their average mileage will be 500 per week; they must be out in all weathers, sometimes on the open sea, often over the marsh, and again in the river. They also aid

in dredging, while waiting for cargoes at the outer edge of the marsh. No class of work boats in the South are more strenuously used than these seafood gatherers, and none have to be built so sturdily or so well.

A similar boat, but of smaller size, is Dante, built at the same shipyards, also for Captain Bassao, of New Orleans, for the same sort of work. This boat is 40 x 14 feet, with 3-foot draught. Her power plant consists of a 20-horsepower Frisco Standard engine, installed by Arthur Duvic, of New Orleans, with make-and-break ignition system and electric light plant. Nine to ten miles an hour is produced by the 34-inch propeller, and oil or gasoline may be used for the engines, whose consumption is placed at about $3\frac{1}{2}$ gallons an hour. Dante's work will be the same as that of North Star and New Champion—carrying oysters from Louisiana Marsh to New Orleans. Her capacity is 250 sacks of oysters, approximately 12 tons, and three men will handle her through her 500 miles of travel every week. Dante cost, in round figures, about \$4,500. An interesting commentary on the value of these working power craft is that the owners estimate each one of them will pay for herself in six months, besides paying all expenses of the owner and crew.

Like the oystermen, the shrimp trawlers are beginning to see the advantages of this new type of boat, and are slowly abandoning the old auxiliaries—most of them merely rebuilt luggers with an engine installed—in favor of the faster gasoline boats. One of the latest of these is Peerless, built for Ole Thompson, of Biloxi, and equipped

by Arthur Duvie with a 22-24-horsepower Peerless coal oil engine, which consumes $2\frac{1}{2}$ gallons of oil an hour. Peerless is 35 feet long, 10-foot beam, and draws 2.5 feet of water, so that she can pass with ease over the tide-filled mud flats where the shrimp are most plentiful. She will serve not only to trawl for the shrimp over these flats, but to carry them to market, 110 miles away, at New Orleans, for this boat is to work, also, in the Louisiana Marsh, though her owner's headquarters nominally are at Biloxi. Her capacity is 200 baskets—about 10 tons—of shrimp, and she will make 10 miles an hour, loaded. Her crew consists of four men, one more than necessary, inasmuch as all must work at trawling as well as operating the boat. Peerless is driven by a 28-inch propeller, and has her own electric lighting plant.

An interesting pioneer in this field, slightly different from either of the three just described, yet far in advance of the old auxiliary luggers, is Althea, which, for some years, has been used as an oyster and fish runner between the lower river and the market of New Orleans. The great discrepancy in this type of boat is speed, few of Althea's class being able to make more than seven or eight miles an hour, and the majority about six. The new boats, with increased speed and greater carrying capacity, should tend to hold down even more closely the cost of sea products, one of the most important factors in the food situation at New Orleans.

AUXILIARY SCHOONERS BUILDING IN THE SOUTH.

Improvement is being made, too, in the big auxiliary schooners along the Gulf coast. Re-

cently, at Biloxi, a regatta was held in which the schooner race was the most popular affair of the entire two-day meeting. From these schooners have grown the big four and five masted auxiliaries which have been built in numbers at Gulfport, Miss.; Orange, Texas; and Lake Charles, La., to carry lumber across the Atlantic and to Central America. Some of these auxiliaries cost as much as a steam freighter, one launched at Orange, Texas, recently, being valued at \$300,000, and another at Gulfport, Miss., at \$220,000. Both these schooners were more than 200 feet in length, were equipped with oil engines, and were of approximately 1,000 tons carrying capacity. Others of similar type are building at Lake Charles, La.; Pascagoula, Miss.; Mobile, Ala.; and Pensacola, Fla.

Gasoline-driven harbor boats, messengers, carriers of labor, water tenders and similar craft are increasing in New Orleans harbor. The latest addition to this port fleet is George S., built by the J. D. L. Mullen shipyard for George S. Schwartz, a stevedore. This boat is to be used carrying gangs of men from shore to ship and back. She is 40 feet long, 9-foot beam, and draws $2\frac{1}{2}$ feet of water. She was equipped by Arthur Duvic with a 25-horsepower auto-marine Buffalo engine, turning a 22-inch propeller to produce a speed of 12 miles an hour. The ignition outfit is of the make-and-break type, and electricity is provided by a dynamo on board. Gasoline is the fuel used and $2\frac{1}{2}$ gallons is consumed for every hour's run. The boat is of the hunting cabin type and requires only one man to run her. She cost \$2,000 and was built in three weeks. This is the

second of these harbor boats to be put into service in New Orleans in three months.

Government boats also have been outfitted extensively in New Orleans and at Plaquemine by the Duvie Company of the Crescent City. One of the most interesting of these was a sea-going mine layer, 90 feet long, 22-foot beam, into which was put an 87-110 horsepower Frisco Standard, to drive a 54-inch propeller, produce electricity for lighting and searchlights and similar uses. The fuel to be used in this boat, whose name, obviously, can not be given, is gas distillate, and she is to have a guaranteed speed of 12 miles an hour. The boat, which was built by Thomas Favre, of Gulfport, Miss., looks like a small steamer and is intended for use in any kind of weather in whatever sea may arise.

At Plaquemine, also, is building another large boat for the Government surveyors and engineers. This craft is to be 65 feet long by 22-foot beam, and of shallow draught, so that she pass with ease over the flooded lands or into and out of the shallow bayous and bays. Mr. Duvie is installing in this boat a 65-horsepower Frisco Standard engine, to use gas distillate and to give the craft a speed of about 10 miles an hour. Peculiar conditions surrounded the installation of this power plant, inasmuch as it must be so geared and controlled that the boat can be slowed to any speed, even as low as one mile an hour, for the convenience of the surveyors who are working from her deck. This was accomplished, however, by various gears, each easily operated by the engineer on signal.

GOVERNMENT ORDERS POWER TUGS.

Eight power tugs also are to be built for the Government at Plaquemine, with engines to be installed by Mr. Duvic. These tugs will be of varying sizes and will be equipped with 20, 30, and 40 horsepower Frisco Standards, using gas distillate for fuel. Further details regarding these craft are unavailable for publication at present.

Kildeer, a 40 x 15-foot canopy launch for the use of the Federal quarantine station, has been received in New Orleans from Philadelphia. A 30-horsepower Frisco Standard was installed in her in New Orleans by the Duvic Company, and the boat, which will be used to visit ships from quarantine and similar work, has been accepted.

The lighthouse service is having built at the Algiers naval station five boats, 21 x 5½ feet, of the dory type, to be equipped with five-horsepower Fay & Bowen gasoline engines. These boats will be used at the lighthouses around the shores of the Gulf.

Users of heavy-duty power boats, whether they be for pleasure or for work, in these southern waters, have found that the speedy type of larger craft, say from 40 to 100 feet, fail to furnish the comfort needed for pleasure parties or the space and stability called for in passenger or freight carriers. The result has been the turning to a type embodied in Frisco Standard, a fishing and hunting boat recently built for Arthur Duvic by J. F. Dupre, of New Orleans. This boat, of the trunk cabin type, is intended to be used both for pleasure and for work and to combine both with the maximum amount of comfort obtainable.

Frisco Standard is 35 feet long, 9-foot beam, and draws 34 inches of water. It is equipped with a 12-15 horsepower Frisco Standard engine, which drives a 28-inch propeller so as to give the craft a speed of 9.5 miles an hour. Gasoline is used for fuel at the rate of $1\frac{1}{2}$ gallons an hour, and the boat is electrically lighted and controlled, the current being made with a dynamo on board. This new boat is now at the summer home of her owner at Biloxi.

The result of all this increases the use of power boats in and around New Orleans and seems to be a sort of crystallization into specialized types for the work to be done. The coming of the war seems to have fixed permanently the place of the large auxiliary in the world's commerce, but the smaller schooner with the "kicker" commonly used for many years in the fishing industry apparently is slowly but surely giving place to the faster, more compact, more reliable, and heavier laden power boat built especially to carry sea products to the market.

The development of inland waterways, and the settlement of great farming tracts hitherto covered by swamps or forest, has led, as has been shown, to a demand for improved freight and passenger-carrying service. This has brought, as the most adaptable type of passenger carrier, the modern cruiser, of shallow draught, with most of below decks given to engine room, and the passengers riding above under the canvas top. *For the freighter, the shallow, self-driven barge, cheap but strong in construction, seems to be the last word. Secretary Redfield is now in the South, investigating the waterways situation.*

[Power Boating, Sept., 1917.]

BOATS THAT "EAT UP" SHALLOW WATER.

[By E. C. Bryan.]

There are many thousands of miles of shallow streams and lakes in this country, now navigated only by punts and skiffs, upon which a power-driven boat would be welcome if it could be employed.

The problem of designing a shoal draft hull is not difficult; the familiar scow is an example. When, however, it has been sought to apply power for propulsion, complications and difficulties have been met. They have been in some measure overcome by stern wheels, side wheels, aerial propellers, and water jets. All of these have objectionable features, noise, dirt, vibration, weight, wear and tear, and high first cost have prohibited their employment in small craft of any kind, in family launches, cruisers, or in the smaller work boats. The submerged screw propeller is the favored and most efficient mover of water-borne craft, and its application to the driving of hulls in shallow waters is the only method by which the demand for efficient power boats for recreation and pleasure or business upon such waters can be met. It is well known that the draft of the normal modern motor boat is not in the hull itself. *The diameter of an efficient propeller submerged a proper distance below the convex keel is the thing which demands the depth of water. The propeller must be submerged. The rare instances in which partially submerged propellers are being used are not in the province of this article. How to submerge the propeller*

and at the same time lessen the draft is the problem which was solved by the invention and development of the tunnel stern.

This type of boat will be a tremendous factor in opening up an immense undeveloped area of lakes and rivers to power boating. They have been regarded only as a deformed skiff or punt. The fact is that every line of grace and beauty possible in any boat can be reproduced in them. Their use is not confined to shallow waters, as they have been found unexcelled in such waters as Lake St. Clair and the Detroit River at their roughest stage. So far as speed is concerned, the open boats of the present type have nothing on them. To illustrate, the Bryan Boat Works at Wyandotte, Mich., have one which they built, a 20 feet by 4 feet 6 inches, powered with a Kermath 12 H. P. It gives them 14 miles per hour. Anything of the same size doing as well is considered a smart boat. We've chugged up a little Canadian river with this boat until we came to parts so narrow that we had to climb overboard and lift the bow around to retrace: The natives, like the countryman at the circus who exclaimed as he looked upon the giraffe, "taint so; there ain't no sech animil," seemed to doubt the evidences of their eyes and refused to accept as a boat a craft which paddled around in waters theretofore navigated by nothing drawing more water than a coot.

The tunnel is a concavity which is formed by the up bending of the keel ribends and planking of the after under body.

The extent of the up bending is determined by the diameter of the propeller, and this by the character of the power employed.

The average depth of the propeller is $\frac{2}{3}$ of its diameter, thus in a 45-foot cruiser, powered with a 24 H. P. heavy duty motor turning a 30-inch propeller. Seventy inches of water is required for its turning, and the 25-foot open launch driven by a motor turning a 16-inch wheel is successfully navigated in 12 inches of water. The propeller, however, is not the only factor in determining the area and form of the tunnel. The forward slope must not be too steep or the resulting drag will impair the efficiency of the wheel, and the after slope must be of such form as will allow a ready clearance of the water thrust off by the propeller and moved by the stream lines.

The designing of the entrance, providing for an easy run, estimating the displacement and trim, and giving the boat the ample initial stability which is such a valuable, but too often illy handled factor in small boats, are all problems especially important in tunnel stern design.

There is no reason why the tunnel stern launch or cruiser should not be an excellent sea boat. Such craft are capable of splendid performance under most trying circumstances.

[Open Exhaust, Feb., 1914.]

MOTOR CRAFT OF CHESAPEAKE BAY.

[By Stuart Stevens Scott.]

The Chesapeake region, that area of tidewater land along Chesapeake Bay which divides the State of Maryland and penetrates deep into Virginia, has felt the influence of the commercial

motor boat as have a few other sections of this country. This may seem a bold statement, and yet statistics will go a long way toward proving it, while even a brief visit will give an optical demonstration.

* * * * *

Prior to the gasoline engine the farmers of tide-water land had sailing craft to depend upon for carrying grain and such cargoes as would not be injured if delayed in transit. Only the farmers close to steamboat wharves could hope to send produce to the cities of Norfolk and Baltimore, and even then in limited quantities, for freight rates were high and steamboat schedules were such as to make the sending of produce risky.

* * * * *

Tidewater Maryland and Virginia have been regenerated. To-day the Chesapeake region is a garden spot. Great truck-patches have taken the place of countless acres of virgin forest and old farms, and it is all due to the gasoline-propelled craft that chug in an endless procession.

Few, indeed, are the farmers of the Chesapeake region who do not own a motor boat, not as a pleasure craft but as an adjunct. In a region so interspersed with streams as to make a boat almost as necessary as a horse and carriage, it is but natural that the people are only too glad to avail themselves of a cheap means of transportation over the liquid highways.

The best evidence of their willingness is that there are within the Chesapeake region fully 10,000 motor boats, and of these, it is safe to say, 80 per cent are used for business purposes.

* * * * *

I said there were fully 10,000 commercial motor boats in the Chesapeake region. I have before me a letter from the Department of Commerce, dated March 18, which reads:

"In reference to the request for the number of boats in the Chesapeake region, this office advises you that the number of motor boats documented on June 30, 1912, at the several ports from Washington, D. C., to Cape Charles, inclusive, were as follows: 14 motor boats over 50 tons; 587 motor boats over 5 tons; 9,148 motor boats under 5 tons.

"All of these motor boats, with the exception of those under 5 tons, are in commercial use. The 9,148 motor boats under 5 tons include yachts and vessels in commercial use."

The above figures give a total of 9,749 craft a year ago. With the natural increase, and taking it for granted that some were missed in the tally, the round number of 10,000 is not far wrong.

(National Waterways, July, 1913, p. 419.)

See "Power Boating's Prize Workboat Design," Power Boating, March, 1918, for design of power work boat 60' x 16', with displacement of only eighteen inches, 42,000 pounds; dead-weight, 25,000 pounds.

[Motor Boat, Oct. 10, 1918, p. 48.]

"AN INTERESTING AIR-PROPELLED MOTOR BOAT."

The use of air propellers is becoming more general. The navigation of very shallow streams, and of waterways infested with weeds, is made possible with hulls which draw only a few inches

and which have air propellers in place of the submerged wheel.

One such boat is shown and described. "The main hull is 20 feet long and 37 inches wide, and is equipped with pontoons which prevent it from tipping over when making turns. We use an 80-horse power Gyro motor with an aerial propeller eight feet three inches in diameter. The entire weight is about 750 pounds. The main hull is 14 feet deep. *When running at from 40 to 60 miles an hour our main hull draws about an inch of water.*"

There are a good many air-propelled boats in service in this country on the shallow waters, but there is a much greater demand for these boats in South America. In Colombia, for instance, they have been used for the delivery of mail and other purposes.

THE PRESENT ASPECT OF THE MISSISSIPPI RIVER PROBLEM.

[By Robert S. Taylor, of the Mississippi River Commission.]

* * * * *

"One further thought, not for its utility but its inspiration. The big dredge has a little brother lately come into the world but destined to work a mighty revolution in waterway transportation. It is the gasoline-motor freight propeller, scarcely larger than an automobile, with its little, flat, shallow scow—the cheapest craft ever floated, a mere box, satisfied with a foot and a half of water, pushed ahead or towed behind, and carrying a few tons of merchandise. It is a true

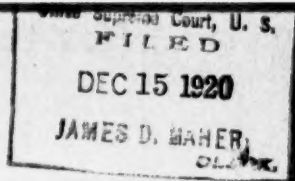
aquatic truck, scarcely more costly than a good team and land truck, and requiring only one man to own and run it. He is in truth

* * * a cook and a captain bold,
And a mate of the Nancy brig,
And a bo'sen tight, and a midshipmite,
And the crew of the captain's gig.

"This little craft has been coming into use lately on the bayous and small streams of the alluvial valley in increasing numbers. That we shall have in the future abundant supplies of fluid fuels and simple engines for using them is not to be doubted. We have been hearing for twenty-five years of the 15,000 miles of navigable channels of the Mississippi and its tributaries. We have taken it as an innocent exaggeration. But these little motor boats, between the Alleghenies and Rockies, and Canada and the Gulf will find all that and more. With their cousins on land next to come—the trolley freight lines, they will gather the productions of that great watershed into the hulls of its big boats as the Lord gathers its rainfall into the channels of its big rivers."







No. 104
IN THE
Supreme Court of the United States

OCTOBER TERM, 1920

ECONOMY LIGHT & POWER COMPANY,
Appellant,

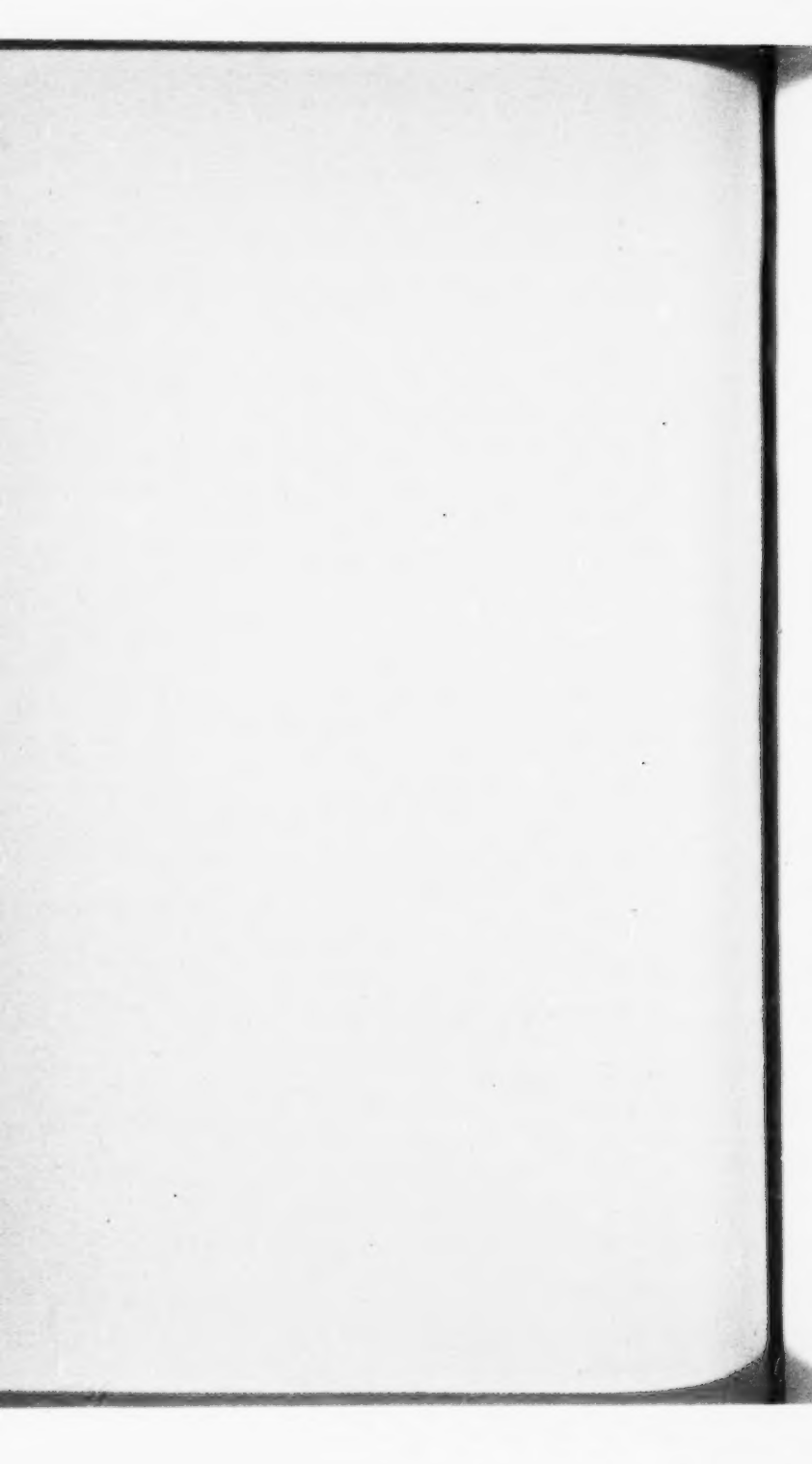
vs.

THE UNITED STATES OF AMERICA,
Appellee.

APPEAL FROM THE UNITED STATES CIRCUIT
COURT OF APPEALS FOR THE SEVENTH
CIRCUIT.

REPLY BRIEF OF APPELLANT TO THE BRIEF
FOR THE UNITED STATES

FRANK H. SCOTT,
Attorney for Appellant.



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IN THE
Supreme Court of the United States

OCTOBER TERM, 1920.

ECONOMY LIGHT & POWER COMPANY,
Appellant,

vs.

THE UNITED STATES OF AMERICA,
Appellee.

} No. 104.

May it Please the Court:

The argument under point III of the Government's brief beginning at page 154, as to the effect of the Acts of 1796 and 1804, confuses the issue. Counsel discuss their effect on streams "actually being navigated at the time of these enactments," and say that Congress "took advantage of the situation by making the perpetual character of the easement of navigation over the then navigable rivers certain and assured beyond any possibility of doubt or question" (Br., p. 156). No Act of Congress was needed to effect that purpose, as to rivers actually navigable within the definition laid down by this Court. If the Desplaines were navigable in that sense, neither counsel nor the Court of Appeals would have had to invoke those early Acts or the ordinance of 1787 to sustain the decree in this case. The Government must face this question: Can a river be held to be navigable under those early Acts of Congress and that ordinance, which would not be so held except for them? When counsel use the term "then navigable"—speaking with reference to the time of the early Acts—they mean, not navigable within any definition of navigable waterways of the United States, but streams

upon which hunters and explorers could, with whatever amount of difficulty, at times pass their small craft. But, as Mr. Justice Miller said in *Duluth Lumber Company vs. St. Louis Boom & Improvement*, 17 Fed. 419, when he held the St. Louis River to be non-navigable, "that has nothing to do with the great point of the navigability of streams of the United States concerning interstate navigation or international navigation." And in dealing with precisely the same contention as is put forward in this case by the Government, but in connection with a stream which had been much more extensively used, and in fact even by small steamboats, Mr. Justice Miller said:

"Something is said in this case about the organic law admitting the State into the Union; about the old Act for the Government of the Northwestern Territory. We have long ago decided that the original Act concerning the Northwestern Territory ceased to be of any force when Congress and the State chose to organize and admit the State into the Union. That ordinance, then, is of no force in such a State."

The cases of *Coyle vs. Oklahoma*, 221 U. S., 559, and *United States vs. Sandoval*, 231 U. S., 28, cited by counsel, we have dealt with in our original brief (pp. 53-54).

The case of *Ruddy vs. Rossi*, 248 U. S., 104, cited in the Government's brief, upholding Congressional restriction of alienation of homestead after the conveyance by the United States in fee simple has no application to the instant case. The contention of the Government here is that the United States might retain sovereign—not proprietary—rights in land included within a new State.

The contention is directly in the teeth of the Act of Cession of the State of Virginia, which ceded the Northwest Territory to the Union upon the express condition that the Territory so ceded should be laid out, and

formed, into States, and that the States so formed should be admitted members of the Federal Union "*having the same rights of sovereignty, freedom and independence as the other States.*" It further provided that the lands within the Territory so ceded (excepting certain lands appropriated for bounties to officers and soldiers of the army), should be considered as a common fund for the use and benefit of such of the United States as had, or should, become members of the Confederacy and should be faithfully disposed of for that purpose. Under this deed of Cession the United States had no power to reserve such an easement as is contended for. It had no such easement in unnavigable streams and carrying places in the old States, and the new States so created stood precisely, in that respect, on the same footing as the original States. It was not even competent for it to retain the title to the beds of navigable streams, ownership of the beds of such streams, above tidewater, being one of the sovereign rights of the original thirteen States. See cases cited in original brief, page 39.

I

AS TO THE GOVERNMENT'S ANALYSIS OF THE EVIDENCE

Appellee confuses the issue by asserting that appellant "rests its case upon the conclusions of the Supreme Court of Illinois, in a case to which the United States was not a party, and in effect ask the reversal of the District Court and the Court of Appeals on the ground that they do not harmonize with the conclusions of that court." Such is not our position. We consider that the opinion of the Supreme Court of Illinois should have great weight, assuming that the facts of both records are substantially the same, and we insist that they are substantially the same. In this we are sustained by the Court of Appeals.

The decision of that Court did not recognize that the difference was such as would warrant a different conclusion. In fact, in the opinion it was stated that:

"The difference in the record in the two cases would not, perhaps, warrant a different conclusion, although the evidence here is somewhat stronger in favor of navigability than in that case. Taking as we do a different view as to the force and effect of the historical facts of the early use of the river, and being clear that it is in fact a navigable stream, we feel that we should follow our own views." (p. 3372, Abst.)

The different view which the Court of Appeals took from the Supreme Court of Illinois clearly appears in the opinion of the former court. It was its opinion that any stream which was valuable for floatage, or was used by traders or trappers, prior to the Ordinance of 1787, or the early Acts of Congress for the government of the territory, had by that Ordinance and those Acts been stamped with the character of navigability, which made them for all time navigable waterways of the United States. That view was not held by the Supreme Court of Illinois, and we think we have demonstrated its incorrectness in our original brief.

Counsel for the Government devote a very large, if not the larger part of their brief, to an effort to show material difference in the records of the two cases. They endeavor to get away from the conclusion of the Court of Appeals in that respect, and we think it is because they recognize that the legal deduction drawn by the Court of Appeals from the facts, as proved in both cases, cannot be sustained in law.

At pages 108 to 117 of our original brief we referred to

every instance of use, or attempted use, of the Desplaines River shown in the record in this case, which did not appear in the record in the State case. And, we showed that the additional matter was in the main a record of failures in the attempts to use that river. Counsel have, however, gone into analysis of the experiences of early explorers and traders upon that river, and have referred to many compilations by persons who had no familiarity with the vicinity in question, in the effort to show a general use of the Desplaines in early days. Although we insist that the statute under which this action was brought, refers to commerce, as that term is understood in modern times, and not to the experiments of such early voyagers, we still feel constrained to refer to counsel's analysis of that evidence for the purpose of showing that it is not accurate, and that many of the sources to which they refer prove that the Desplaines in its natural condition was not navigable in the sense that it could be generally used, even for the purposes of those early adventurers.

The conclusions of Dr. Thwaites and Prof. McLaughlin were based on extracts from various works submitted to them by the Government, which constituted part of the material collected and relied on, by Prof. Alvord.

They made no independent study of the question. (See our original brief, p. 160.) Alvord had made an exhaustive study of the subject, for he had testified at great length in the State's case against this appellant, and had made a further investigation for the purpose of preparing himself to testify in the instant case. As an impartial historian, it was reasonably to be expected that when he gave excerpts from narratives he would not confine himself to such portions as seemed to aid the Government's case; that when he made, or used translations,

they would be correct translations; and that in dealing with compilations he would have used some effort to ascertain from what sources the information therein contained was obtained. He did none of these things. In his testimony he used excerpts from narratives to support conclusions which were wholly refuted by other portions of the same narratives, to which on his direct he did not refer. He used translations the inaccuracies of which had been pointed out by other historians, which inaccuracies concerned the questions at issue herein, and they effected the validity of his conclusions. He introduced like inaccurate translations made by himself. He knew of the existence of accurate translations which he did not use. He introduced, and relied on, preposterous statements to prove that the Desplaines had been navigated, such as that in Woodruff's History, which referred to steamboats plying the Desplaines to Chicago in 1878, which if true would have involved their climbing over dams and crossing dry land.

In our reply brief in the Court of Appeals, we called attention to this misuse of historical sources by Alvord, but Government's counsel in their brief here still adhere to statements made by him, which do not correctly represent the sources on which he relies, and which, if left unexplained, must necessarily mislead.

We will now, therefore, as briefly as possible, analyze Alvord's statements, the sources on which he relied, and counsel's synopsis of them.

The translation by Alvord of page 125, 2 Margry, in which is related La Salie's opinion of the Desplaines, is illustrative of his method. In the translation which he introduced on the direct appeared the following: "When ice is formed there is no longer water in the Chicago River." (Abst., 35.) The word "Chicago" here is ad-

mitted by all to refer to the Desplaines. Of course, the passage, as translated by Alvord, suggests lack of water in winter, the season when there is no navigation. As a matter of fact, and as admitted by Alvord on cross-examination, the meaning of the original instead of being "when ice is formed." is "when the ice is melted." (Abst., 296.)

In the same translation (Abst., 35) La Salle is made to say that in summer "there is not *enough* water in the river," while in fact he said "there is no water *at all* in the river." (Abst., 295.)

In the same translation as given on the direct appears the following: "The Chicago (Des Plaines) River is not even navigable for canoes except after flood." This appeared as an entire sentence. As a matter of fact it was an inaccurate version of the last part of a sentence. A correct translation of the phrase in which it appears is as follows:

"and then if one should persist in this communication by means of ships, as they cannot navigate in the lakes before mid-April because of the ice and often even later, and because *never at this season nor afterwards the rest of the year*, is Chicago (Des Plaines) navigable even for canoes unless after *some storm*." (Abst., 296.)

Other erroneous translations of La Salle's narratives will be referred to herein later.

Further, the inaccuracy of Alvord's work, and the invalidity of his conclusions appears from many of his statements. For instance, upon the direct he introduced and construed the meaning of certain passages from a letter of La Salle's which he had translated, and he emphatically declared that in those passages La Salle was comparing the Kankakee and the Desplaines routes. He said

he based that conclusion upon an examination of the entire document, and considered the particular passage in relation to the whole contents. (Abst., 32-36.) He insisted upon this strenuously under cross-examination. As a matter of fact there was no reference in the document to the Kankakee. The portion of the letter which Alvord assumed referred to the Kankakee, clearly referred to a passage up the Ohio and the Wabash to Lake Erie. He admits this (Abst., 178-179) and says that he "should have glanced over the next page and would have seen that the river he referred to is by the Ohio."

The passage from Turner's "Character and Influence of the Indian Trade in Wisconsin," referred to by Prof. Alvord, does not mention the Desplaines River, and its reference to a *general route* whereby it was possible to reach the Mississippi from the Wisconsin country, as being "By the Chicago River to the Illinois" supports no inference as to the use of the Desplaines River itself as an avenue of trade and commerce. Prof. Alvord admits that pack horses were largely used throughout the west in the fur trade of the latter part of the 18th and the first part of the 19th centuries. (Abst., 267-268.) Hubbard, when he became superintendent of the American Fur Company, abandoned all attempts to use the Desplaines, and went to and from the Illinois with pack horses. Before 1820 wagons were used to transport boats from the Chicago to the Illinois (Abst., 116).

The excerpt from "The American Fur Trade in the Far West" by Chittenden, on which Alvord relies, likewise does not mention the Desplaines River, nor can it be any evidence of the use of that stream as a carrier of trade and commerce.

Counsel quote from Marquette's narrative of his expedition of 1673 in such fashion as to convey an impression

that Marquette easily traversed the waters of the Desplaines to Lake Michigan from the lower Mississippi River. A fair reading of the entire excerpts presents no proof whatsoever of his use of the Desplaines River. The account offered by Prof. Alvord (Abst., 23) discloses that "another river" which left the Mississippi at about the 38th degree is the Illinois and not the Desplaines. Marquette says it is "wide, deep and still" for 65 leagues (which description never has applied to the Desplaines), and that they found on it the Indian village of Kaskaskia (which no one has ever placed on the Desplaines River but which was in the neighborhood of Ottawa) from whence he was escorted by the young men to Lake of the Illinois (Lake Michigan) (Abst., 23.) Marquette speaks of the ease of a portage of 30 leagues (Abst., 1461), carrying his canoe, and it is a reasonable conclusion, from the fact that his journey was made in September, that when the young men of Kaskaskia village escorted Marquette's party to Lake Michigan they *probably* portaged the whole or most of the length of the Desplaines River. His equipment was of the lightest and easy to transport. (Abst., 1532.)

Alvord, contrary to the plain meaning of the context, insisted that Marquette's statement that "In the spring and during part of the summer there is only one portage of half a league" (Abst., 23) referred to the Desplaines. The Government quotes this in its brief (p. 38). Marquette was referring to the Illinois from about where Ottawa is now situated to the Mississippi. (Abst., 211.)

Counsel say of La Salle's trip of 1681, simply that he "went up the Illinois River to Lake Michigan in search of Tonty." La Salle returning from Canada by the much longer St. Joseph-Kankakee River route, found the Illinois village near Fort Creve Coeur (near the present site

of Peoria) (Abst., 29) sacked; went on down the Illinois River to the Mississippi in search of Tonty, and returning back up the Illinois and to Lake Michigan. On cross-examination Alvord admitted that there was no proof that La Salle went to Chicago, or any particular distance up the Desplaines, his ultimate destination being the fort on the St. Joseph. (Abst., 28.) *It is explicitly stated that suffering great hardship he went on foot*, the river being frozen. This journey, therefore, could have nothing to do with the use of the river in boats. (Abst., 1609, 32, 33.) Alvord says he did not put this instance in as being of much use. (Abst., 214.)

Of the "similar" trip which counsel say Tonty made, the account, ascribed to La Salle (Brf., 7, Abst., 29) simply says that Tonty "ascended this river without leaving any signs of his passage." Tonty himself, writing of the journey, simply says, "We made our portage." (Abst., 30-31.) No other account of this journey is more explicit. We do know, however, from the context of all these accounts, that the journey was made in the late fall or early winter, because Tonty reached the Pottowatomi village, further on, in December. From our knowledge of the usual stage of the river at this season, it is reasonably certain the portage was a large portion, if not all, the way from the mouth of the Desplaines to the Chicago. The accounts of Joutel (Abst., 1922, 1736, 1741, *et seq.*), Charlevoix (Abst., 58, 266, 1405, 1406), Hubbard (Abst., 1509 *et seq.*) Schoolcraft (Abst., 1569 *et seq.*), Graham and Phillips (Abst., 1403), La Salle (Abst., 257, 294), St. Cosme (Abst., 1692), Joutel (Abst., 1742), Tanner (Abst., 3253-3256), and others, elsewhere presented in the briefs, support this conclusion. (Abst., 1608.)

Alvord's statement that La Salle and Joliet were not in disagreement as to the use of the Desplaines for commerce

in small boats and canoes, is not correct. La Salle expressly stated that the river *was not even navigable for canoes*, except after some storm. (Abst., 257-258.) He said it would be better to use horses, or go around by the Kankakee.

Alvord's statement that La Salle's rejection of the Desplaines in favor of the Kankakee route was due to prejudice against Joliet as a Jesuit, and La Salle's interest in diverting the fur trade of the Illinois country to the Gulf, is quite beyond reasonable defense. It was of vital importance to La Salle, and to the welfare of his post on the Illinois, that he should avail himself of the most direct route to, and from, Canada. It is inconceivable that he would use as he did use, the St. Joseph-Kankakee route, if the Desplaines River route, more than two hundred miles shorter, were available, and this simply because he was prejudiced against the Jesuits. (Abst., 279-1601-1604.) Each route brought him to Marquette's mission, which was not at Chicago, but at Kaskaskia (not the Kaskaskia of later times) on the Illinois, in the heart of the field of La Salle's operations, and at the very door of his capital, Ft. St. Louis. (Abst., 1604.)

Joliet is known to have passed through the Illinois country but once, whereas La Salle is known to have been intimately familiar with it over a period of many years. As to Joliet we have only Frontenac's understanding of what he is said to have related, while as to La Salle we have his own account, with his reasons in great detail for his disagreement with Joliet.

Counsel (Br., p. 41) refer to *Joutel's Journal* of La Salle's last voyage as one of Alvord's sources showing the use of the Desplaines River. *One of Alvord's grossest inaccuracies was in connection with the account of Joutel's journey.* He used in part a poor, or rather, garbled trans-

lation, which omitted entirely the portion of the narrative which tells how Joutel came from the Illinois to Chicago. He also used in part the French work of Margry which is correct, but he did not refer to that portion of the latter which tells the true story of Joutel. *The "Government brief" refers only to the journey referred to in this garbled version of the journal. Joutel's experience, as it appears in the correct translation, showed that the Desplaines in its natural state was generally incapable even of canoe navigation.*

In the original French in Margry, Vol. 3, page 480, but not in the translation used by Alvord, it appears that Joutel and the remainder of La Salle's party were at Fort St. Louis (Starved Rock) and desired to go to Mackinac. They arranged to have Indians carry their goods to Lake Michigan, 30 or 40 leagues, for the reason that at that season there was *"no water at all in the river, or at least very little, this being a troublesome matter."* (Abst., 1741, 1742.) Just as they were about to depart three men arrived from Mackinac whence they had come by lake to Chicago, *and leaving their canoe there they traveled on foot to Ft. St. Louis.* It was arranged that Joutel's party should trade their canoe for the one left by these men at Lake Michigan. *In the narrative used by Alvord it was stated that these men came in December, and that they failed to carry their goods in a canoe down the Desplaines because the river was frozen. The Margry edition shows that the month was September, and the reason was not that the river was frozen, but that there was no water in it.* Joutel's party traveled on foot to Chicago. There they found the canoe which the Frenchmen had left in the lake, embarked in it, undertook their journey, failed, turned back and made their way to the fort on the Illinois, *leaving their canoe at Lake Michigan.*

Here were two trips, therefore, made over land by Joutel and his party for a distance of 30 or 40 leagues, and although, having canoes, they did not use them because there was no water in the river. (Abst., 1739, 1744.)

In the following spring they returned to Chicago with a canoe, but when they came to the Desplaines, which is described as "a rapid stream" they were obliged to go ashore and then again into the water to draw along the canoe, and the narrator says that they were "under a necessity of going often into the water." *This third trip alone is referred to by Alvord on his direct* (Abst. 44-45; and is the only one referred to in the Government's brief.

Counsel say (Br., p. 40):

"Government introduced a map by Father Hennepin published in 1683, which shows the Chicago-Desplaines-Illinois route connecting Lake Michigan with the Mississippi; the Chicago-Desplaines portage is also shown."

They omit any reference to Hennepin's description of the Desplaines, which certainly should be considered in connection with his map. He said:

"The creek through which we went from the Lake of the Illinois, into the Divine River, is so shallow, and so much exposed to the storms, that no ship can venture to get in, unless it be a great calm. Neither is the country between the said creek and the Divine (Desplaines) River, fit for a canal; for the meadows between them are drowned after any great rain, and so a canal will be immediately filled up with sands; and besides, it is impossible to dig up the ground, because of the water, that country being nothing but a morass; but supposing it were possible to cut the canal, it would be, however, useless; *for the Divine River is not navigable for forty leagues together;* that is, from that place to the village of the Illinois,

except for canows, who have hardly water enough in summer time. Besides this difficulty, there is a fall near the village." (Abst., 38.)

Counsel say (Brf., p. 41) that Champigny wrote Louis XIV stating that Tonty and de la Forest had a warehouse at Chicago and another at Michilimac'inac. The statement is in a communication dated 1697, and is that "they now have a warehouse at Chicagou, in the country of the Miamis." Counsel ignore the admittedly general application during that period of the term: "Chicagou," and its variations, to the region to the south, southeast and southwest of Lake Michigan (Abst., 227) and the fact that the Miamis were generally located around the St. Joseph and to the southeast of Lake Michigan. (Abst., 206-208, 210, 261, 262, 263, 264.) The fact was that at this time *there was* a post at St. Joseph which had been erected by La Salle (Abst., 228) and in view of all the circumstances, it is but reasonable to suppose that this was the post of Tonty and de la Forest, to which Cadillac referred.

Counsel next take up the narrative of St. Cosme's journey. (Bf., p. 41.) *It is one of the most persuasive source evidences that the Desplaines was not, in its natural condition, capable of even canoe navigation, except during short periods of flood.* We ask the court to compare the statement made concerning it in our opponent's brief with the narrative itself as it appears on pages 48 to 51 of the abstract. It is an excellent illustration of how inadequate and one-sided their statement of the evidence is. They say Shea (an historian)

"gives an account of St. Cosme's going down the Chicago Des-Plaines route. He left Chicago October 29,

1700, made a portage 'which is three leagues long, when the water is low and only $\frac{1}{4}$ of a league in the spring.' P. 49."

The portage here referred to was from the Chicago to the Desplaines River. *When the party reached the Desplaines River it was compelled to make a portage all the way to the Illinois.* "They saw well that being obliged to carry their effects and canoe it would take them a great while to reach the Illinois." They dragged their canoe because there was no water. "You always make a portage, there being no water in the river except in the spring." The men "marched on land, each with his pack." From Chicago to the fort they reckon 30 leagues. "Here navigation begins." It took St. Cosme's party fourteen days to go from Chicago to the mouth of the Desplaines. And when St. Cosme returned over this same route in the spring his party did not use the river at all, but walked from approximately the region of Starved Rock. (Abst., 1565.)

It is next stated by counsel (Brf. 42) that Thwaites' Jesuit Relations contains a letter from Father Gravier which the witness says indicated he used the Des Plaines route September 8, 1700. There is in the excerpt no such reference. It is a mere inference of Alvord's from Father Gravier's statement that he had received a letter at "Chikagoua"—"whence I started on the 8th of September to come here," that is, to the Guardian Angel Mission. (Abst., 203.) The location of this mission has never been accurately established. (Abst., 202-208.) There is not the slightest evidence that it was on the Illinois or the Desplaines. Thwaites says that in his opinion it was at Chicago, but in the index to his Jesuit Relations it was referred to as being on the St. Joseph. (Abst., 378.) And in 1 Jesuit Relations, 223, Thwaites fixes it as being in the lower peninsula of Michi-

gan. (Abst., 204-205.) The only value this excerpt has lies in the fact that it illustrates how far afield Alvord went to establish the historical use of the river.

Next counsel referred to a rough draft of a report by James Logan in "Chicago Antiquities." Logan probably never came further west than Philadelphia. He was simply an ill-informed writer of the period. (Abst., 1538.) Dr. Thwaites said he would consider that Logan's report was made by a man not personally familiar with the western country. (Abst., 363.) In this same report, Logan describes "Fort Miami" as on the mouth of the Chicago River (Abst., 57), and thereby discloses his ignorance of the facts, because there was no fort at Chicago at that time. (Abst., 1870; Abst., 52, 198.) Fort Miami was a well known fort at the St. Joseph River on Lake Michigan. (Abst., 198-199, 454, 460.) Logan's description of what counsel interpret as the Chicago-Desplaines portage, accurately described the St. Joseph-Kankakee portage (Abst., 306-307) and it is clear that his information was with reference to the latter (Abst., 454 *et seq.*), and that his application of the term Chicago to the St. Joseph River reflected lack of knowledge, or the intentional use of the word as applied to the St. Joseph, to which it was not infrequently applied during that general period. The Kankakee is really the upper Illinois, and it was often included in the designation of the "river of the Illinois." It is important to note that this report of Logan's which clearly applies to St. Joseph, and not to Chicago, was adopted by other writers whose works have been introduced by the Government and which are referred to in its brief, and by repetition of the same erroneous report in various books and pamphlets, an imposing mass of misstatement has been introduced into this record.

Charlevoix (Brief, p. 143) is next referred to in the

Government's brief, but if the court were left to rely only on that reference, it would have little understanding of the significance of the excerpts from Charlevoix's letters which were read in evidence. The Government's historical excerpts (Abst., 389, 266, 431) *relying on an incorrect translation made of his narrative in 1761* say that Charlevoix was turned aside from his use of the well known Chicago-Desplaines route because of a storm which hindered his going around the southern end of the lake, from the eastern shore.

The translation of 1761 omits Charlevoix's statement that he took the St. Joseph route which was much longer, because the Desplaines was "but a brook." (Abst., 58, 1187.) Prof. Alvord, who introduced the translation of 1761, knew of this omission. He had used the correct translation of 1763 (Abst., 1187-1189) in the State case. Counsel say "The foregoing not in the State case." The erroneous translation was not, but the correct translation was. Charlevoix's account (Abst., 59) of the difficulties of the St. Joseph-Kankakee route, and what we know of its very much greater length, forces the inference that the difficulties of the Desplaines route must have been very great indeed. (Abst., 1406-1408.)

Mitchell (Brf. p. 43), who in 1757 said the French, in their fur trade, had hitherto been obliged to go by the great lakes and "down the river Illinois into the Mississippi," does not thereby shed any light upon the use which was made of the Desplaines River in traversing a route he designates so generally as to include the Kankakee-St. Joseph Rivers. There is no evidence that he ever saw the Illinois country much less than the Desplaines River.

Duprats (Brf. p. 44; Abst., 66) also makes a general statement in his book published in 1774, that the first

travelers came from Canada, by way of the Illinois into the Mississippi. No mention is made of the Desplaines. Dupratz is not shown to have been north of the Ohio River, and what he says is a mere second-hand statement of a general route. (Abst., 1433-1434.)

Choiseul, who wrote the memorial in which is the reference to the portage aux Chenes into the Illinois, was never in America and had no direct knowledge of its geography.

There is no evidence that *Thos. Hutchins* (Brf. p. 44; Abst., 72), who says the Illinois River affords communication with Lake Michigan, was ever in this portion of Illinois. (Abst., 1170.) All that Hutchins presents in his book by way of detail of the Illinois country, is by reference to an account by one Kennedy who tried to ascend to the headwaters of the Illinois in a boat, in August, 1773, which he was compelled to abandon 15 miles below the mouth of the Desplaines because of shallow water. (Abst., 1525.) Any possible inference to be drawn from Hutchins's statement as to the navigability, of the Desplaines is certainly negatived by Kennedy. (Abst., 1172.)

Jean Baptiste Perrault (Brf. p. 45; Abst., 76-79) came up the Illinois in the springtime flood. He left Cahokia May 4, 1783, had one barge and one canoe, and was directed to "pass by Chicago" and rendezvous on Lake Michigan. The Desplaines is not mentioned in his account. (Abst., 217.) It was perfectly possible for him to "pass by Chicago" without coming up the Desplaines. He may have come up the Kankakee, or by the Calumet. Callot went by the Calumet to Chicago (Abst., 218, 1563) and La Salle, Hubbard and others took the St. Joseph route.

Hugh Heward (Brf. p. 46; Abst., 81, 83), who traversed the Desplaines in a pirogue in May, 1790, went down in a period of extreme high water, and that the

danger of the trip was great appears from his narrative. He speaks of a portage and long rapids. Some of his men, after passing Joliet, told him that because of the dangers they might not return with him.

Callot (1826), who speaks of boats passing from the lake into the Desplaines (Brf. p. 47; Abst., 88), relates a condition which was limited to a period of extreme high water in the spring. He also points out the possibility of gaining the lake from the Illinois River by the Calumet route, in high waters.

Inlay (Brf., Part II, p. 15; Abst., 89), who said that the Illinois was navigable *for batteau* to its source from whence was a portage only 2 miles to Chicago, was never at Chicago (Abst., 1529, 240); he named Charlevoix, Carver and Hutchins as his authority on the Illinois country, none of whom had ever traversed the Desplaines route. His statement as to the distance from the portage on the Chicago River to the lake, which he says was sixteen miles, shows his information to have been very inaccurate (Abst., 241, 1529.)

Counsel say that *Robert Dickson* (Brf., p. 48; Abst., 91) mentions the route by Chicago as one of two ways of communication between Mackinac and the Mississippi. Dickson said "the communication between Mackinac and the Mississippi is carried on by two routes, the one by Chicago, the other by the Fox and the Wisconsin Rivers, *the latter is preferred on account of the shortness of the carrying place.*" As appears elsewhere, the carrying place between Chicago and the Illinois, was frequently to a point far down that river.

The Treaty of Grenville, 1795 (Abst., 90), makes no reference to the Desplaines, but to the portage between the Chicago River and the Illinois, and down the Illinois to the Mississippi.

Counsel omit any reference to a letter of one Selby introduced by Alvord, although material immediately preceding, and following, it is dwelt upon.

Pridcaux Selby, who was Secretary of the Indian Department at Detroit from 1790, for a number of years, points out that the route from Mackinac by the Illinois River, though much nearer, is to be rejected in favor of the long Fox-Wisconsin route, *because the former subsides too rapidly to be available for the carrying of troops or supplies and is, even when high, filled with rapids and shallows.* (Abst., 92.) This is an answer to the claim of counsel that the Desplaines was used for the transportation of troops, in support of which there is no evidence in the record, and throws light on Forsythe's statement next to be referred to.

Thomas Forsythe, 1814 (Brf., p. 48), indicates nothing as to use made of the Desplaines. Forsythe's table is to be interpreted in the light of knowledge from other sources of conditions governing the navigation of the Desplaines. This observation applies with equal force to his mention of the possibility of Indian attacks from above, down the Chicago-Illinois route by canoes (p. 97). He must have known, as did Marquette, St. Cosme, Charlevoix and others before him, that the water was ordinarily very low and un-navigable even for canoes, and that, as Marquette relates, a portage of 30 leagues was a very simple matter to Indians with their light canoes. (Abst., 1435, 1436.)

The letter of *Governor Cass*, in 1815 (Brf., p. 48, Abst., 97), does not mention the Desplaines River, but speaks of the route by way of Chicago and down the Illinois as one of the three great channels of communication from Canada to the Mississippi. The evidence discloses that about this time there was a well-beaten wagon road all the

way from Chicago to the Illinois, over which boats were carried in wagons (pp. 3255).

John Kinzie, who wrote Cass in 1815 (Brf., Pt. II, p. 16; Abst., 100) that at that time boats of several tons burden could pass from Lake Michigan into the Mississippi River, was making a plea for the re-establishment of conditions that would restore his trading business lost to him by the Chicago Massacre. (Abst., 1534.) He understated the difference in elevation between the two waters, and did not limit the period during which the boats might pass. (Abst., 1852.) Kinzie's tendency to overstate is illustrated by his remark that he had lived in Chicago 20 years when he had only lived there eight years. (Abst., 470.)

Wm. Darby (Brf., p. 49; Abst., 105-108), who mentions the Chicago and Illinois Rivers as affording the most eligible natural connection between the north and south waters of the United States, and prints an editorial from the St. Louis *Inquirer*, as "deciding the long-contested problem of a natural water communication between the waters of the St. Lawrence and Mississippi Rivers," was never any nearer the Desplaines than Detroit and southern Illinois. (Abst., 279.) The editorial, as we shall point out, is extremely inaccurate in its description of the rivers and is recognized by Thwaites (Abst., 395) and McLaughlin (Abst., 352) as being "somewhat exaggerated." Darby's statements are obviously founded upon it, and are equally inaccurate. The editorial was written by Thomas H. Benton, Senator from Missouri, as part of his propaganda for the building of canals by the Federal Government. (Abst., 1175-1177.) The statement in the editorial to which counsel refer to the effect that "in high water boats of 10 or a dozen tons pass without obstruction," and that "Hundreds, nay thousands, of boats have been seen at St. Louis had made a similar passage," cannot have been true. There was no

population, or trade, in Illinois, or Chicago, to demand a commerce such as that which the alleged "hundreds, nay thousands of boats" carried. (Abst., 1178-1183.) Two years after the date of this editorial there were but five houses in Chicago (Abst., 1108-1109), and there was but one house on the Illinois and Desplaines between the Mississippi and Chicago. (Abst., 1111-1112.) The nature and amount of commerce on the Lakes up to 1840 was not such as to make possible such a commerce between St. Louis and Chicago. (Abst., 1183-1186.) A portion of Hubbard's furs were shipped from Chicago for the first time in a small schooner in 1823, which had brought supplies for the garrison. The course of trade of the French of Cahokia and vicinity was not by way of the lakes and the Illinois (Abst., 1341-1343), but by New Orleans. (Abst., 1419.) From 1763 to 1790 trade between Canada and Illinois country and St. Louis was by the Wabash route. Kinzie used bases from 1804 to 1812, and from 1812 to the time of the editorial there was little trade, and few traders, because of the war of 1812. In the latter year the garrison at Chicago was massacred and the settlement destroyed.

Darby concludes a very inaccurate description of the headwaters of the Chicago and the Desplaines (Abst., 106) with the remark that "*the Plein (Desplaines) also flows with a very slight current and the two streams present almost a strait between the Mississippi River and Lake Michigan.*" (Abst., 106.)

The editorial includes this:

"They (the Chicago and Desplaines) have neither falls nor shoals; they have not the character of streams but of canals; the water hardly moves in their deep and narrow channels."

On the contrary, the Desplaines has a fall greater than the Sault Ste. Marie Rapids (p. 2216).

La Salle described the river as having a greater current than the Rhone. The Government's chief engineering expert, Mr. Cooley, in an official report to the Governor of the State, said:

"From the end of the 12-mile level to Lake Joliet was seventeen miles—a mere surface stream over bedrock—with a steep declivity over the lower half of the distance descending to a level of 76.5 feet below Lake Michigan. * * * The Desplaines River practically goes dry above Joliet."

Government's counsel refers to the report of Graham & Phillips and to the fact that Phillips was Judge of the Supreme Court of Illinois. That report discusses the feasibility of opening communication between the Chicago and the Desplaines by means of a canal. It contains this language: "The Plein, during half the year, does not contain water enough to float a boat and so could not become useful as a national highway" (Abst., 115); and further that at one season of the year there is "a portage of fifty miles, from the mouth of the Plein to the lake over which there is a well-beaten wagon road and boats and their loads are by oxen and vehicles kept for that purpose by the French settlers at Chicago." (Abst., 116.)

The Government relies largely on Gurdon S. Hubbard's "Sketch of Life," referred to in our original brief (pp. 114-117). The use made of it in the Government's brief makes some further comment necessary. This work was introduced by Alvord. Until cross-examination he made no reference to the portion in which Hubbard gave his reasons for abandoning the attempt to use the Desplaines when he became Superintendent of the Fur Company, and none to his use of the very much longer

route by the St. Joseph and the Kankakee to the Illinois, to avoid "the delay and hardships of the old route through Mud Lake and the Desplaines." (223.)

In the Government's brief it is said "Hubbard's account shows that in the fall in the dry weather the boats were unloaded and pushed *through the ditch on short rollers.*" (Br., p. 54.) The ditch here referred to is between the Chicago River and the Desplaines. The narrative immediately following discloses that Hubbard and his party had the same difficulties to contend with all the way down the Desplaines to the Illinois.

Hubbard said (Abstract 120):

"It took us three consecutive days of such toil to pass all our boats through this miserable lake; when we finally camped on the banks of the river (the Desplaines) our goods had all crossed the portage and we were once more ready to proceed. Our boats being again loaded, we resumed our voyage down the Desplaines until we reached Isle La Cache, where low water compelled us to again unload our goods in order to pass our boats over the shoal that here presented itself; and again we encamped after a hard day's labor."

Isle La Cache is but a few miles down the river, and is above Lockport. From that point Hubbard's party were compelled to carry their goods on their backs nearly all the way to the Illinois River. He says, page 121:

"Our progress from this point was very slow indeed, and most of the distance to the Illinois River our goods were carried on our backs, while our lightened boats were pulled over the shallow places, often being compelled to place poles under them, and on these drag them over the rocks and shoals. In this manner almost three weeks were occupied in reaching the mouth of the Fox River and two days more brought us to the foot of Starved Rock."

Fox River is far down the Illinois, and the passage therefore shows that the upper Illinois and the Des-plaines would not accommodate the passage of boats.

Hubbard's narrative all through throws light upon the conclusion of the Government experts "that traders found a very easy passageway by means of these rivers in the early spring." There is no record of any trader passing up this river in a boat carrying furs or other produce, except in Hubbard's narrative. He says, concerning his return trip, page 122:

"The first night we halted at our old camp ground at the foot of Starved Rock. From this point, until we reached Cache Island, our progress was very slow, averaging but from six to ten miles per day. The river was high, the current swift, and the rapids strong, and as the boats were heavily laden and a cold storm prevailed, we were glad to camp early and afford the men a much needed rest. Early in the morning we left Cache Island, and as the wind was strong from the southwest, we hoisted our square sails for the first time, and rapidly passed up the Des Plaines River, through Mud Lake, to South Branch, *regardless of the course of the channel*, and soon reached Chicago."

It is to be remembered that Cache Island is above Lockport; that the rapids are below that point and continue at intervals all the way to the Illinois River. The easy passage was only from Cache Island to Chicago, which was nearby, and was over prairies flooded with water; a condition which existed for very short periods in the spring. The channel of the river was disregarded.

That the passage was not easy in the spring is shown by the accounts of La Source and Montigny, who having traveled up the Illinois by water as far as possible, went by land 90 miles to Chicago. (Abstract 1565.)

In 1675 a surgeon attempted to pull his boat up river in the spring, but he gave up the attempt. We have referred to the unsuccessful attempt of Joutel's party to do the same thing.

The next work referred to by counsel in connection with Alvord's testimony is the narrative of *Schoolcraft*. Alvord omitted a portion of that narrative in which Schoolcraft not only showed the Desplaines to be un-navigable, but also committed himself to the opinion that no short canal would effect communication between the Chicago River and the Illinois.

Schoolcraft came up the Illinois in a canoe in August, 1821, for the purpose, among other things, of examining the situation with reference to the proposed canal. He was forced to abandon the canoe at about Starved Rock. There was often less than four inches of water. Therefore, he and his party came by horses from the Illinois to Chicago. He referred to the error of those who supposed a canal of only eight or ten miles would be necessary to perfect navigation between Lake Michigan and the Illinois. (Abst., 1192-1193.)

Upon cross-examination, Alvord testified that when he prepared his evidence on the direct, he knew of this portion of the narrative, but did not use it. Likewise, Alvord did not refer to a footnote in Schoolcraft's *Travels*, being an extract from an account by *Thomas Tousey* of his visit to the Desplaines in 1822, which appears at page 113 of our original brief. Tousey said that he came imbued with impressions favorable to the canal, but concluded that the project of the canal would be of greater difficulty than he, or the public, generally had supposed, *the ignorant supposition arising from the study of books and maps instead of viewing the country as he did.* (Abst., 1189-

1190.) It is a fair presumption that Tousey's erroneous impressions must have been gained from some of the misleading compilations on which the Government and its experts rely, most of whose authors never saw the Desplaines. These erroneous statements can nearly all be traced back to Logan's report, and to the work of Hutchins, to whose errors we have referred.

Counsel next refer to the journey of *Ebenezer Childs* in 1821, from St. Louis to Chicago. He came in a light canoe with two men and no cargo. It was in the time of the spring floods, the whole country was inundated, and he traversed the prairie in his canoe from the Desplaines to Chicago. In discussing this narrative Prof. Thwaites expressed the opinion that if, for a couple of weeks in the spring, the country was inundated between the Desplaines and Chicago Rivers, so that boats passed over it, that would establish it as a navigable route for travel. (Abst., 884-885.) This is a side light on the conception which the Government's historical experts had of the meaning of the term "navigable stream," and upon the value of the conclusions they have drawn from the narratives upon which those conclusions were founded.

In the Government's brief (p. 56) appears the following:

"Ordinance of 1878 fixed the northern boundary of the Illinois at the line west from the Southern boundary of Lake Michigan. Pope, the Illinois delegate, got this changed so as to have a port on the Lake which would tend to bring in the northern settlers by the northern waterway. This obviously refers to the Chicago Desplaines."

This is an excellent illustration of the tenuous inferences which the Government is compelled to draw to build

up its case. Obviously the language means, and the context shows, that the purpose was that northern settlers should come in by the Lakes, rather than to have the current of immigration from the South by the Ohio. (Abst., 129.)

The next work referred to by counsel is *Ogden's Letters*. (Brief p. 56. Abst., 128.) Contrary to the statement of Alvord and of the Government's brief, Ogden was probably never in Illinois. Thwaites had edited these letters with a preface giving authority to them. It was shown by Prof. Quaife that they were plagiarisms. The fact that Ogden plagiarized is proved, and the sources from which he took his material, are placed in parallel columns, on pages 1547 to 1562 of the abstract.

Beck's Gazetteer (Brf. 56, Abst., 131-133) is based principally upon Graham & Phillips' report (Abst., 132) which, as appears above, stated that the Desplaines could never become a national highway. The Gazetteer also shows, in a passage which counsel does not refer to, that in the writer's opinion a canal would be necessary, and that the Desplaines could not be looked to to supply the water for it, because of the great floods in the spring, and its dry condition at other seasons. (Abst., 133.)

Keating's "Narrative," etc. (Brf. p. 57, Abst., 135, 136), relating that he was informed that "this route was frequently traveled," and that Hopson told him that he had traveled it with ease in a boat loaded with lead and flour, proves nothing as to the use of the Desplaines River. It does not reflect personal experience, or his observation, of the Desplaines because he never passed beyond the Mud Lake region. It is to be observed that Keating exchanged his boat for a pirogue (a hollowed out tree trunk) which drew less water, and that he says

"there was scarcely water enough to permit our pirogue to pass." (Abst., 135-136.)

Fonda's Reminiscences (Brf. p. 58, Abst., 137, 138) merely shows that he passed up the Desplaines in a canoe. If so, we must fairly infer from other sources, either that it was in springtime or that rains had raised the water higher than usual; or else that they had to portage much of the Desplaines. There being no statement as to the latter, one of the two former alternatives is probably the true one. (Abst., 1701.)

"*Drown's Peoria*" (Brf. p. 57, Abst., 139) which contains the statement that John Hamlin exported produce from Peoria to Chicago in 1825, is an almanac, and directory, and advertising medium, of a flimsy character. It was written a quarter of a century after the alleged fact. Its statement that John Hamlin carried produce from Peoria up the Desplaines to Chicago part way in keel boats and part in Durham boats, building a storehouse at the mouth of the Kankakee, is highly improbable, because there is no other instance in the whole record, of the produce of the country being carried up the upper Illinois or Desplaines by boats, also because the physical conditions made it impossible for boats of that character to pass up or down the river, also because persons who settled in the neighborhood within a few years thereafter never heard of such an event or of any storehouse, said to have been built at the mouth of the Kankakee, and lastly because there was no settlement at Chicago at that time which could have justified such an undertaking. There were but nine people in Peoria in 1825, and but three or four families in Chicago. (Abst., 1820-1823, 1930-1932.) The garrison was removed in 1823. (Abst., 1471.) At the period in question there was produced at Chicago "a superabundance of all the luxuries of farm, cornfield and

dairy." The difficulty was how to dispose of the amount produced. (Abst., 1472.) Commerce on the lake and through this Illinois country was about as disclosed in the authorities referred to elsewhere herein, which have been cited to refute the editorial about "hundreds, nay thousands," of boats at St. Louis which had come there *via* the Desplaines.

The *Report of the Select Committee*, in 1825 (Brf. p. 58, Abst., 140) expressed the opinion that it is feasible to connect the Illinois and Lake Michigan by canal, basing that opinion upon Lond and Graham & Phillips. It was the product of no independent investigation, and has no added weight.

Morse's "*American Gazetteer*" (Brf. p. 58, Abst., 142) is a mere compilation treating of the geography of the entire world. It was prepared by the editor's assistant, and the pertinent portion is based on Hutchins (Abst., 1169, 1632-33), and it is therefore subject to the same criticisms, as far as it relates to the Desplaines, as are shown with respect to Hutchins.

The Navigator, 1824 (Brf. p. 58, Abst., 147) is also a mere compilation. It presents secondhand information of the region in question. The compiler apparently followed Imlay, for the same error which appears in the latter, and which is above pointed out, is in *The Navigator* in substantially the same language.

Timothy Flint, 1832 (Brf. p. 58, Abst., 150) claimed no other merit than being "a laborious and faithful compiler." There is no proof that he was ever on the Illinois, or nearer Chicago than Jeffersonville, Ind. He simply repeats the common misapprehension about the ease of communication between the lake and the Illinois. Tousey, as we have shown, points out the unreliability of such publications, and of the erroneous impression which they

had given him as to the ease of communication between Lake Michigan and the Illinois. (Abst., 1835-1836, 1458-1459, 1832-33.)

Hoffman (Brf. p. 60, Abst., 158), who makes the error of stating that the Desplaines rises 11 miles west of Chicago, bases his detailed account of the portage and the passage thereof, upon Keating's account, and is entitled to no more weight than Keating, because though Hoffman visited Chicago it was in extremely cold winter, and he could not have seen the thing of which he writes. (Abst., 1462-1465, 1933.)

Woodruff's History of Will County, 1878 (Brf. p. 60, Abst., 159), wherein it speaks of small steamers plying regularly in 1878 between points on the Kankakee and Chicago, carrying to that city grain and bringing back lumber, salt, etc., makes a statement which is wholly untrue. (Abst., 1578-1579.) During the taking of the testimony, counsel for the Government admitted that these steamers made use of the aqueduct and the Illinois and Michigan Canal, and did not enter the Desplaines at all except where the canal and the river were coincident, constituting the upper and lower canal basins at Joliet. (Abst., 1579.)

Woodruff himself, in his pamphlet containing a series of lectures delivered in 1874, on the history of Joliet and Will County pointed out that the opening of the Illinois and Michigan Canal meant a new era in the history of Joliet and vicinity; that theretofore goods had been transported from Chicago chiefly by ox teams, drawing wagons; that a stage route between Chicago and Ottawa by way of Plainfield was established in 1834; that in 1838 or '39 the route was changed so as to go from Ottawa to Chicago directly up the west side of the river.

Alvord, by whom Woodruff's history was introduced, on cross-examination admitted that "from the evidence that has been introduced I should say that it was not proved historically that it was the usual custom for the farmers living along the Desplaines River to send their products to Chicago by boats." He ventured the thought that there "seemed to be some indication" that such use of the river was occasionally made in the spring or early summer, but being pressed for any such "indication" finally admitted that, except the excerpt from Woodruff's History, he knew of no statement showing such use. He also admitted that there was no instance of any of the farmers who came into this country, getting in by way of the Desplaines River. (Abst., 255, 256.)

Winsor's Narrative and Critical History (Brf. p. 61, Abst., 165) does not "refer to the Chicago-Desplaines route" but to the route "by the Chicago River at the southwest of Lake Michigan to the Illinois, thence to the Mississippi." The Desplaines is not mentioned, and as has been abundantly shown, the portage from the Chicago River frequently extended the whole distance to the Illinois. The context shows also that Winsor was referring to canoe navigation.

Lieut. Col. James H. Wilson's report of 1867 to which counsel refer (Brf. Pt. II, p. 25, Abst., 160), shows the non-navigable character of the stream as follows:

"The river itself, except in floods, is very shallow, being often reduced in dry seasons to a mere brook, discharging less than 1,000 cubic feet of water per minute. (Abst., 2844.)

This canal, from a point 8 miles southwest of Chicago, follows the valley of the Desplaines, a tributary of the Illinois, until it forms a junction with the Kankakee River, some 50 miles southwest of Chi-

ago, below which the river is known on the map as the Illinois. The latter name would have been more appropriate for the Kankakee above that point, as it is the main river and the Desplaines, in low water, contributes a comparatively insignificant quantity to its volume.

The Kankakee supplies water sufficient to make a good slack water navigation; the Desplaines of itself does not, and although the direction of the former was such that it was not probable that a favorable connection with Lake Michigan could be made through its channel, yet it was deemed advisable to determine that fact beyond cavil." (Abst., 2843, 2844.)

"*Illinois in 1837*," referred to by counsel (Brf. p. 61, Abst., 162), is a compilation by an unknown author. Alvord did not allude to the following statement in it, "Peru is situated on the Illinois River *at the head of river navigation*." (Abst., 1527.)

Hinsdale's "Old Northwest" (Brf. Pt. II, p. 27, Abst., 167, 168) merely speaks of carrying place between the Chicago River and the Illinois.

We ask the court's attention to the analysis by Professor Quaife of the conclusions of the experts for the Government, beginning at page 641 of the record. The brief for the United States does not do justice, either to the testimony of Quaife or Lee, but it is manifestly impossible to follow out in detail all the points in which this injustice appears. The brief represents Quaife as refusing to answer "yes" or "no," as to whether the Desplaines was used by fur traders in the 17th Century, and as refusing to draw any conclusions as to whether or not the Desplaines was ever used, except in the fifteen instances pointed out in the record. (Brf. 115.) A reading of Quaife's testimony will show that this is not a fair state-

ment. He did refuse to answer "yes" or "no," because he said such an answer would be misleading. And, he went on to point out what he meant by that. But he stated "that it was so used was a warrantable, a possible, and a probable deduction." (p. 1656.)

II

THE ACT OF THE ILLINOIS LEGISLATURE UNDER WHICH THE SANITARY DISTRICT CANAL WAS BUILT, WAS FRAMED EXPRESSLY TO PROTECT PRIVATE WATER POWER RIGHTS IN THE DESPLAINES RIVER. THE CHARGE THAT MUNROE AND HIS ASSOCIATES SOUGHT TO FORESTALL THE SANITARY DISTRICT IN DEVELOPING WATER POWER IS WITHOUT JUSTIFICATION.

In the Government's brief an attempt is made to create the impression that Munroe and his associates acquired the land for the building of the dam with a view to forestalling the development of water power by the Sanitary District, and to take an undue and unwarranted advantage of the expenditure of some \$63,000,000 by the public in constructing the Sanitary District Canal. They refer to the fact that Sections 5 and 6 of the Act of the Illinois Assembly, May 14, 1903, empowered the Sanitary District to develop, use and sell the water power created above the upper basin of the Illinois Michigan Canal, as showing that this was the policy of the State; but the Government does not tell this Court that the Act in question was so drawn as to expressly protect the private water power rights below the mouth of the Sanitary District Canal, and that it expressly prohibited the trustees from exercising any power over the waters drawn from Lake Michigan through the Canal after those waters left its southern terminus. The upper basin of the Illinois and Michigan Canal where the Act empowered the trustees to develop water

power was at and above Joliet. The power there belonged to the Sanitary District. The dam which appellants propose to construct and was constructing was some 14 miles below that point. Section 7 of the Act referred to provided:

"In no case shall said Board (Board of Trustees of the Sanitary District) have any power to control water after it passes beyond its own channel, water ways, races or structures into a river or natural water way or channel, or water power or dock situated on such river or natural water way or channel."

The water power in question here being far below the point where the water passed from the channel of the Sanitary District, clearly it was not only not contemplated that the Sanitary District should have any power of control over it, but such power was expressly denied. The 23d Section of the Act provided:

"This Act shall not be construed to authorize the injury or destruction of water power rights."

One of the water power rights thus protected was that which appellant purchased. At the very point where appellant sought to erect its dam a water power existed and a dam was erected in 1833. Counsel say in substance that there was no water power along the Desplaines, except at dam No. 1 at Joliet, which had any value in a modern sense until the addition of the waters of Lake Michigan. Several water power dams at points below the junction of the Sanitary District with the Desplaines existed from the earliest days of settlement. A summary of them is given at page 2084 of the Abstract. It was, of course, known to the Legislature when it passed the Act creating the Sanitary District, that those powers would be greatly increased and rendered more valuable by the addition of the waters

of Lake Michigan. It is a well-known fact and appears from the Record that the preservations of these very water powers was debated and thoroughly considered by the Legislature, and that sections 7 and 23 of the Act were incorporated for the express purpose of protecting them (Abstract, pp. 2020-2023). If, as counsel claim, there was no natural water power of any value in the modern sense along the Desplaines, except at Dam No. 1, the Legislature must have intended that the existing water power which would become valuable in the modern sense should be preserved and protected.

Counsel say that Munroe obtained from the State whatever rights it might have had in connection with the water power at Dresden Heights through what they characterize "frugal arrangements" with the Trustees of the Illinois and Michigan Canal. To meet what is insinuated by this statement it is only necessary to refer to the decision of the Supreme Court of Illinois in *State vs. Economy Light & Power Company*, 241 Illinois 20. It is there made clear that the State had no rights in that connection, and its ownership was only of the canal and its tow banks and of a very few acres of worthless land it had never been able to sell, and which Mr. Munroe bought at the price at which it had been carried for years on the books of the Trustees. The contracts with the Trustees of the Illinois and Michigan Canal were declared valid by that opinion of the Supreme Court of Illinois.

III

THE STATEMENTS IN THE GOVERNMENT'S BRIEF AS TO
THE CIRCUMSTANCES CONNECTED WITH THE SUBMIT-
TING OF PLANS TO THE SECRETARY OF WAR
ARE IN DIRECT CONFLICT WITH THE RECORD

Counsel for the Government referring to that subject

say they feel constrained to "lay the whole matter before the Court" (Brief, 24). That which they have laid before the Court bears no resemblance to the facts. They say, and reiterate, that the officials of the United States expressed no opinion as to the navigability of the Desplaines, but that Mr. Munroe insisted at every step that it was not a navigable river (Brief, 168). The fact is that Colonel Bixby, the local engineer in Chicago, and General Mackenzie, the Chief Engineer, assured the Assistant Secretary and the Secretary of War that the stream was not navigable, and it was because of the statements so made by General Mackenzie to Secretary Taft that the latter gave his opinion that the Government had no power to interfere with the construction of the dam in the river. Counsel say (p. 19):

"Colonel Bixby, the local engineer, in his letter dated March 27, 1906, does not attempt to pass upon the question of navigability and deals with the question upon the representation of the water power company that it is not navigable."

Both statements are contrary to the fact. No representation of the Water Power Company, or of any predecessor in title, that the stream was not navigable appears in the Record. But Colonel Bixby's letter expressly says:

"The Desplaines River, so far as now known to this office, has never been considered a navigable stream of the United States. It is therefore apparently as yet subject to such jurisdiction as applies to all other unnavigable streams and not subject to the provisions of Sections 9-13 of the Act of March 3, 1899, or to other similar U. S. legislation." (Abstract, 2872.)

It is hardly necessary to comment upon the claim gravely made in the Government's brief (p. 168) that

Colonel Bixby acted upon the statement of Munroe that the Desplaines was not navigable, when it is remembered that Bixby was the Government engineer in charge of the District, and that his office was at Chicago within a few miles of the Desplaines River.

Counsel referring to the hearing before Secretary of War Taft, when the Trustees of the Sanitary District sought to persuade him to prevent the further construction of the dam, say:

"After reading the record on this subject counsel's contention that the War Department assured appellant's predecessors that the stream was non-navigable, has some elements of humor." (P. 170.)

It is apparent that counsel themselves have not "read the record on this subject." They say the account of this proceeding is very meager and begins on page 1935 of the Abstract. There is a meager reference to it at the place mentioned, but counsel have overlooked the full report at page 3219 to 3228, and this although we called attention to it in our brief. The record as there presented shows that it was General Mackenzie, Chief of Engineers, who advised the Secretary of War that the stream was not navigable. Counsel state in their brief, page 22, that:

"The Secretary and the Engineer did not inform appellant that the stream was not navigable but appellant informed them in regard to the matter."

Counsel would have this Court believe that the Chief Engineer of the Army, within whose jurisdiction came the subject of the navigability of rivers, sat back and permitted Mr. Snapp to deceive the Secretary of War, and that thereby the Secretary was led to say that the stream was not navigable. They would have it believe that when

the Secretary asked the engineer as to the fact Mr. Snapp took the answer out of his mouth. At page 3223 of the Abstract it appears that Secretary Taft asked this question: "As a matter of fact, it is not now navigable?" And General Mackenzie answered: "It is not now navigable." General Mackenzie further said in reply to the Secretary that the Department was not seeking to exercise any authority over an existing navigable stream, and that if Munroe's associates went ahead the Government could not go into court and could not by an order of the Department prevent them from doing anything. General Mackenzie added that "possibly we would call the attention of the Department of Justice to the matter simply to have them consider it as a legal proposition." Again, Secretary Taft asked General Mackenzie: "Yes, but the Desplaines is not a navigable stream, is it?" And the General replied: "It is not today, sir." We are unable to understand how counsel in insisting that it was Snapp and Munroe and not the engineers who asserted non-navigability of the stream, could have overlooked this part of the record and our references to it at pages 88 to 89 in our original brief.

In the Government's brief in quoting excerpts from Mr. Taft's opinion asterisks are used representing certain omissions from the text. Those omissions are statements by the Secretary which show that the stream was held by the Department not to be navigable. Thus, on page 21 of the brief, appears the following:

"Mr. Taft then says the application (of the Sanitary District Trustees in opposition to the building of the dam)—'and it is rather informal than otherwise,—is for this Department to take no official action which may interfere with the State control of water power which may be developed in the Desplaines River,' etc.

Then follow asterisks in the brief. In the record the following language follows:

"The truth is that the Desplaines River, *not being a navigable stream, no permit was necessary to put any obstruction in it which the War Department could prevent.* But even if it had been a navigable stream, and even if the application had been made, and properly made to this department to say whether this would interfere with navigation, if the department concluded that it would not interfere with navigation, it is not within the power of the department to withhold its expressing such an opinion and granting such a permit so far as the United States is concerned, for the purpose of aiding the State in controlling its water power."

And again on page 22 of the Government's brief where asterisks are used, Secretary Taft asserted:

"That the Government had no power to interfere at all" and that statement was based upon the fact that the stream was not navigable.

Government's counsel tell the Court that having obtained title to the property Munroe knew that "only one obstacle stood in the way of his success; that was the navigability of the Desplaines River;" and further that he, Mr. Munroe, being a lawyer, knew that no investigation of the legal status of the matter could be entered upon without having it instantly apparent that the Desplaines was in law a navigable stream, subject to the jurisdiction of Congress, and that under such circumstances he approached the local Government engineer, and through him the Secretary of War practically for the purpose of trapping the Government. They say that at the very "threshold of this investigation lay the *Montel'o* case, 20 Wallace 430," in which the control of Congress over public waters was discussed, navigability defined, and the Chicago-Desplaines-

Illinois route was stated to be one of the three great avenues from the St. Lawrence to the Mississippi which were declared to be within the protective terms of the Ordinance of 1787." In passing it may be observed that the Chicago-Desplaines-Illinois route is not mentioned in the Montello case. The court in referring to Smith's History of Wisconsin states that he says:

"At this time (1718) the three great avenues from St. Lawrence to the Mississippi were one by way of the Fox and Wisconsin Rivers, one by way of Chicago, and one by way of the Miami of the lake."

We have shown that the Government reports from the earliest down to the latest have stated in substance that the Desplaines was not navigable and could not become the part of a great national highway. But if it were true, as counsel say, that investigation of the legal status of the matter would have made it instantly apparent that the Desplaines was in law a navigable stream, it is unthinkable that Munroe and his associates, so believing, would have invested a huge sum of money in their enterprise without having asked a permit from the Secretary of War. They could have asked it with almost absolute assurance that it would have been granted, and they would then have had clear legal title to maintain their dam, and a solid basis for the \$2,000,000 of bonds which they floated, and for their further investment. We say it was practically certain that such permission would have been granted, because there was no reason within the meaning and spirit of law why it should not have been granted. As we have seen, the Secretary of War, in his opinion, definitely stated that if it had been a navigable stream and the application had been made to the Department and the Department had concluded it would not interfere with navigation,

it was not within the power of the Department to withhold its expressing such an opinion and granting such a permit. This language leaves no doubt that the final authority on the matter of granting a permit was of the opinion that he could not lawfully have denied it.

IV

IT IS NOT THE FACT AS STATED IN THE GOVERNMENT'S BRIEF (PAGE 20) THAT ASSISTANT SECRETARY OLIVER DECLINED ANY REQUEST OF MR. MUNROE'S.

Assistant Secretary Oliver refused nothing but took precisely the action which Mr. Munroe asked for and which Colonel Bixby recommended. Mr. Munroe did not ask for a permit for the very obvious reason that the Desplaines was not navigable. What he desired in the submission of the plans was clearly stated in the letter dated March 27, 1906, from Colonel Bixby to General Mackenzie, in which Bixby said:

"that Munroe and his associates desired to secure from the War Department some opinion informal or otherwise, so far as it can properly be given, that will allow them to assure all inquirers that the War Department so understands the situation and is making no objection to the prompt prosecution of such work as is necessary to a business enterprise of its magnitude and importance."

That opinion the War Department gave (Abst., 2875-2877, original brief pages 87 and 88). In the Government's brief it is said that Assistant Secretary Oliver referred to the conditions which Mr. Munroe and his associates were willing to comply with. He referred to conditions not emanating from Mr. Munroe and his associates, but recommended by Colonel Bixby, and adopted by Assis-

tant Secretary Oliver, and restated in his letter of June 7, 1906, to Mr. Munroe (p. 2877).

Both from this correspondence and the statements of Gen. Mackenzie to Secretary Taft (Abst., 3223), it is clear that Mr. Munroe obtained from the Department exactly what he asked for.

V

THE OPINION AS TO THE NAVIGABILITY OF THE DESPLAINES EXPRESSED IN THE LETTER OF THE ASSISTANT SECRETARY OF WAR TO ATTORNEY GENERAL STEAD, IS WITHOUT WEIGHT BECAUSE IT HAS NO REFERENCE TO NAVIGABILITY AS CONTEMPLATED BY THE ACT OF MARCH 3, 1899.

Counsel for the Government refer to the letter of Assistant Secretary of War Oliver to Attorney General Stead dated October 28, 1907, in which the Assistant Secretary stated that the Desplaines and Illinois Rivers were considered by the War Department to be navigable streams. This letter was written a few days before the State of Illinois brought its suit to enjoin the present appellant, and nineteen months after the correspondence between Colonel Bixby, General McKenzie and Assistant Secretary Oliver, in which the river was stated to be unnavigable, and in which it was expressly declared that the work proposed to be done by Mr. Munroe would be in general harmony with the improvement recommended by the Board of Engineers under the Act of 1902. If Secretary Oliver meant by his letter to the Attorney General that the Desplaines was navigable for commerce, his statement was directly in conflict with the reports of the engineers of his own department.

The report of the Barlow board had stated that "the upper Illinois and Desplaines Rivers are at present non-

navigable." (Abst., 2855.) The Benyaurd report of 1883 and 1884, had said that the only feasible plan to render the Illinois and Desplaines Rivers navigable between Joliet and La Salle was to slack water the entire distance. (Abst., 655.) The report of General Wilson in 1867 had said that "the river itself, except in floods, is very shallow, being reduced in dry seasons to a mere brook, discharging less than 1,000 cubic feet of water per minute." (Abst., 161.) Further, if Assistant Secretary Oliver meant by the letter in question that the Desplaines was navigable for commerce, his statement was in direct conflict with the testimony of the chief of engineers, General McKenzie, in this case, who said: "From the reports which we have I should judge that the river (Desplaines) is not capable today of conducting a profitable commerce in the way that commerce is usually conducted now." (Abst., 2115.) And further he said: "We consider it navigable in law, we do not consider it navigable in fact." (Abst., 2122.)

The explanation of the difference between the statements contained in the letters of 1906, and in that to Attorney General Stead, may be found in the testimony of General McKenzie. It was his office that advised Assistant Secretary Oliver what answer to make, and he gave his interpretation of navigability in these words: "When we speak of navigability I can only say that a river which will float a log is to us a navigable river, and, undoubtedly, the Desplaines River is capable of such navigation." (Abst., 2115.)

The Act of March 3, 1899, was certainly not intended to apply to "such navigation" and the Bixby-Oliver-Munroe correspondence was dealing with navigation of the kind contemplated by that Act. General McKenzie's recommendation to the Secretary of War as to the proper answer to make to the question of Attorney General Stead, and the weight to be given to the opinion expressed

therein, receives further illumination from the following excerpts from General McKenzie's testimony (Abst., 2121) :

"Q. I would like to get this thing clear, General, so that I can understand it thoroughly. I gather that your opinion and position in the matter is this; that as a legal question, whether the river is navigable in law, or whether the United States has any right to regulate it, is a question that you cannot pass upon, and not intending to express any opinion except that the United States and your department consider all rivers navigable until somebody proves them otherwise?"

This question was objected to, and counsel then asked :

"Do I state your position fairly, General?"

A. Essentially, yes. We do take that view on the ground that there is no authority outside of Congress and the court that can declare a river navigable."

This further question was then asked :

"So, on the other hand, you do not mean to say that when your department states this is a navigable river, it does not say that useful commerce can be carried on that river without improvement?"

A. We do not pretend to answer that question."

VI

AS TO THE CLAIM OF THE GOVERNMENT THAT THE ILLINOIS LEGISLATURE HAS NOT GIVEN CONSENT TO THE BUILDING OF THE DAM.

It is claimed that the record in this case shows, not only absence of authority on the part of the Legislature, but an act approved December 6, 1907, specifically declaring the Desplaines and Illinois Rivers to be navigable streams,

and making it unlawful to construct any obstruction to their navigability and providing for the removal of obstructions then existing. The Act of Congress in question applies only to navigable rivers. The Supreme Court of Illinois in the *State vs. Economy Light & Power Company, supra*, expressly finds that the Desplaines is not a navigable river. It was so found in *Druley vs. Adams*, 102 Ill. 177. Therefore, it follows that no authority was necessary from the Legislature of that State for the construction of this dam. The Act of the Illinois Legislature of 1907 was expressly aimed at appellant in this case. The Supreme Court of Illinois has held that that act was of no validity as against appellant, because the Legislature cannot by its *fiat* make a stream navigable which was not in fact so. The cases which hold that such statutes are ineffectual are numerous.

VII

AS TO THE GOVERNMENT'S CLAIM THAT EVEN IF THE DESPLAINES HAD NOT BEEN NAVIGABLE IN A STATE OF NATURE, THE NAVIGABILITY RESULTING FROM THE ADDITION OF THE WATERS OF LAKE MICHIGAN WOULD HAVE BROUGHT IT DIRECTLY WITHIN THE CONTROL OF CONGRESS AND THE TERMS OF THE ACT OF MARCH 3, 1899, WITHOUT REFERENCE TO THE EARLY ACTS.

This contention appears on page 164 of the Government's brief. It is directly contrary to numerous authorities cited by us in our original brief at page 102, *et seq.* Counsel rely upon cases having to do with the admiralty jurisdiction of the United States over canals opened by States to public use for purposes of commerce, and while in fact used as highways of commerce. We have distinguished these cases at pages 78 to 80 of our

original brief. Counsel for the Government say that *U. S. vs. Cress*, 243 U. S. 316, supports rather than denies their contention. In that case appears the following language, page 325:

"It follows from what we have said that the servitude of privately owned lands forming the banks and bed of a stream to interests of navigation is a natural servitude, confined to such streams as in their ordinary and natural condition are navigable in fact and confined to the natural condition of the stream. And, assuming that riparian owners upon non-navigable river tributaries of navigable streams are subject to such inconveniences as may arise from the exercise of the common right of navigation, this in like manner must be limited to the natural right."

But counsel contend that where the courts have used the words "in its natural condition" or "ordinary condition," it has used the words "natural" and "ordinary" to indicate the usual or periodic state of the water as distinguished from unusual floods, and not as distinguished from a volume due to artificial but permanent changes.

The opinion in the *Daniel Ball* case has been cited and interpreted many times and nowhere has it been given the meaning contended for by counsel for the Government. It was interpreted in the *Montello* 20 Wall 430. At page 435, 20 Wall, appears the following from the brief of the Attorney General:

"Where the navigation is the principal one, and the artificial merely dependent and ancillary thereto, and the natural stream is in fact navigable within the ordinary acceptation of the word, then the river forms a part of the navigable waters of the United States, if, by means of artificial navigation, it is practically made so and interstate commerce is actually carried on."

It was, therefore, plainly urged by the Attorney General in that case that the test of navigability was the natural capacity of the stream independent of artificial improvements. The court decided in favor of that contention, saying:

"The vital and essential point is whether the natural navigation of the river is such that it affords a channel for useful commerce. If this be so, the river is navigable in fact, although its navigation may be encompassed with difficulties by reason of natural barriers such as rapids and sandbars."

This language leaves no room for argument that the court had in mind:

"the usual or periodic stage of the water as distinguished from unusual floods and not as distinguished from a volume due to artificial but permanent changes."

The court was specifically dealing with the "natural navigation of the river" unaided by artificial improvements, and its conclusion was as follows:

"from what has been said, it follows that Fox River is within the rule prescribed by this court in order to determine whether a river is a navigable water of the United States. It has always been navigable in fact, and not only capable of use, but actually used as a highway for commerce, in the only mode in which commerce could be conducted, *before the navigation of the river was improved.*"

In *Thunder Bay River Booming Co. vs. Speechly*, 31 Mich., 335, Judge Cooley said:

"The public right is measured by the capacity of the stream for valuable public use in its natural condition."

While it is clear from the evidence that the Desplaines has not at any time been, and is not now, navigable, there is, in fact, no conflict among the authorities on the proposition under discussion; and if there were no authorities and the court were to be guided only by reason, it could, we submit, come to no different conclusion. In Illinois the title to the beds of rivers, whether navigable or non-navigable, is in the riparian owner. That title is derived from the State. Whatever its nature was when thus originally acquired, such it remains until, by the exercise of the right of eminent domain and, the payment of compensation, it is taken away entirely, or in some manner qualified or burdened. He who acquires the bed of a navigable stream, from the beginning assumes the burden of an easement of navigation for the benefit of the general public; but he who purchases land which includes a stream not navigable, acquires the same unburdened title to that portion which is covered by water as to the remainder. To enter upon that portion of it is as much a trespass as to enter on any other portion. It would be difficult to devise any theory upon which the State, or the United States, could, by the addition of waters, or by dredging a channel, create a highway across lands so situated, any more than they could project a street through a city block, without compensation to the owner and without due process of law. In either case the act would be confiscation. The right of a farmer to use, and enjoy, that portion of his lands through which an unnavigable stream passes is, so far as the public is concerned, as well defined, and as unqualified, as his right to any other portion of his farm.

It is well known that, in the early settlement of the country, the selection of sites for homes and farms, as well as for saw and grist mills, was largely dependent

upon the conditions as to flowing water. Indeed, the trustees of the Illinois and Michigan Canal, in early publications, referred to the water powers upon the Desplaines River as an inducement to persons to purchase these very lands. The earliest settlers availed themselves of these water power privileges. In 1833, Beard built a dam substantially at the site of appellant's dam. At that time there were dams entirely across both channels of the river at Treat's Island, on part of what is now appellant's water power property. In 1833 the McKee dam was built at Joliet. Norman's dam was situated in an old numbered section between Lockport and Joliet. The Haven dam below Joliet was erected in the year 1839. The right to maintain it was recognized by the Supreme Court of Illinois in three different suits, and the Sanitary District was ultimately compelled to pay for it the sum of \$70,000. In 1841 the Circuit Court of Will County decreed that the trustees of the Illinois and Michigan Canal should pay \$16,700 for the McKee dam, and in 1845 they did so, and took a conveyance of the dam, and the right to the dam site. These early riparian owners found an unnavigable river. They erected dams across it at various places, and their right to do so was respected, and protected, by the courts. That such rights are property, and of large value, need not be argued.

Inasmuch, as, in the case at bar, counsel in their brief have distinctly asserted a right in the public to deprive the appellant of its property because of artificial additions to the volume of the stream, the language of Judge Cooley, quoted in our original brief at page 106, is particularly pertinent.

In *Pearson vs. Rolfe*, 76 Maine, 380, the court said (p. 385):

"It is the natural condition of a stream which determines its character for public use. And it must be its navigable properties in a natural condition, unaided by artificial means or devices."

Substantially this language has been used in a number of cases, some of which the court quotes in the above decision, and so far as we are able to find there is not a single authority to the contrary. Of what weight, then is the mass of reports of engineers collected in this record, as to schemes, or plans, for *creating* a navigable channel in the Desplaines River? To the Government's case they give no aid. To appellant's they afford most substantial support, because they recognize the fact that the stream, in its natural condition was not navigable.

In *East Hoquiam Boom and Logging Company vs. Nesson*, 54 Pacific 1001; 20 Wash., 142 (1898), it is said:

"It is well settled that a stream which can only be made navigable or floatable by artificial means is not a public highway."—Citing *Daniel Ball*, 10 Wallace, 557, and other cases.

In the Government's brief it is said that:

"Even if the stretch of the Desplaines in question had been substantially unnavigable 'without the artificial aid of canals' the fact that it served as a connection between the obviously navigable water of Lake Michigan and the Illinois River would in itself have rendered a navigable water of the United States and within the protection of Congress."

And they cite *U. S. vs. Chandler Dunbar Co.*, 239 U. S. 25356.

The Soo St. Marie, which is referred to in that case is a great waterway obstructed by a short rapids. It connected Lake Superior with the lower lakes. The Des-

plains in a state of nature did not connect Lake Michigan and the Illinois. When a connection was made between that lake and the Illinois, it was by digging a canal from the Chicago River to Ottawa.

We refer the court again upon this point to *Veasey vs. Moore*, 14 Howard 568, cited in our original brief page 73.

The case of *State vs. Carpenter*, 68 Wis., 165, 60 Amer. Reports, 848, is very persuasive. That was an action brought by the State to prevent the placing of an obstruction in Rock River at Janesville. In Wisconsin the provision of the Act of 1787 concerning navigable waters and carrying places was specifically adopted as Section 1, Art. 9, of the Constitution. For that reason alone it is operative in that State. *State of Wisconsin vs. Adams*, 15 L. R. A., 561. Notwithstanding that fact, however, it was held in the *Carpenter* case that even though Rock River was a navigable stream under the Ordinance of 1787, and the Constitution of the State, and putting an obstruction in it was, therefore, technically a public wrong, yet inasmuch as it had not been used for navigation for many years and was obstructed by dams and bridges, a court of equity would not enjoin a further obstruction at the suit of the Attorney General. The court said:

"There was a time, in the early settlement of the country bordering on this river, when it was practically and in fact navigable, and actually used to a limited extent for the floating of logs, and perhaps for small boats and barges. But since that region has been denuded of its forest, and other and better means for transportation have come into use, such practical use of the river has been entirely abandoned, and its waters have been exclusively used by riparian proprietors and for hydraulic purposes, and it has been spanned by highway and railway bridges and

mill-dams in near proximity with each other throughout its entire course. We shall see that these considerations and conditions cannot be ignored in a case like the present one, where a court of equity is asked by the Attorney-General, on behalf of the public, for an injunction to restrain a single encroachment upon the waters of this river, which at most will not much increase the obstructions which have for a long time existed to its technical and legal navigability.

"The nuisance does not consist in obstructing the river, but in obstructing the use of the river as a navigable stream by the public. The defendant may have no right whatever to erect a building in it that may obstruct the navigation of Rock River, and by doing so he may be technically guilty of a public wrong. But that is not the question. Where is the immediate hurt, injury, inconvenience or peril of the public in this threatened construction, that a court of equity should be called upon to exercise this extraordinary and questionable jurisdiction to enjoin it? If completed, as threatened, the public may not for many years, and probably never, suffer any injury or inconvenience from it. The river has not been navigable in fact, or navigated or used or needed for such purpose, for many years, and probably never will be again. The wrong and injury to the public, if any, are merely technical and nominal. Courts of chancery should not be called upon to exercise this high jurisdiction in a case where it is needless and useless and a mere idle ceremony. *Cui bono?* In order to have the character of navigability, this river should be navigable in fact, or navigable to some purpose useful to trade or agriculture, and must be generally or commonly useful for such purpose, if courts are called upon to interfere to protect its navigability."

See also, *Attorney General vs. Delaware, etc., Rd. Co.*, 27 N. J. Eq., 631.

VIII

AS TO THE ALLEGATIONS THAT THE SANITARY DISTRICT CANAL IS NAVIGATED.

Counsel for the Government ask the Court to take judicial notice that the Sanitary District Canal has been actually navigated for 19 years and that for years a passenger packet has navigated between Joliet and Chicago. The Court is asked to take judicial notice of what is not a fact. There has never been a passenger packet navigated between Joliet and Chicago. At the Chicago terminus of the canal there is an 8-track lift bridge. The motor power to lift it has never been installed. It was so built that such installation could be made whenever the Government took over the channel for purpose of navigation. Small boats have infrequently passed under it. This is out of the record, but so is the statement of counsel as to the passenger packets navigating between Joliet and Chicago.

IX

IT IS NOT THE FACT THAT GOVERNMENT REPORTS HAVE EVER RECOGNIZED THAT THE DESPLAINES IS NAVIGABLE. THEY HAVE SHOWN THE CONTRARY.

Counsel make references to certain reports of the Government engineers for the purpose, as they say, of showing that the actual navigation, and the navigability of the Desplaines River was recognized by the Government in an official report as early as 1819, and that the general government has had in contemplation the improvement of the river for purposes of navigation since 1867. The report of 1819, above referred to, is that of Graham and Phillipps, in which it was said:

"The Plein during half the year does not contain water enough to float a boat, and so could not become useful as a navigable highway." (Abst., p. 115.)

It was this report that pointed out that at one season of the year the portage was 50 miles, which eliminated the Desplaines altogether, and that there was a well beaten wagon road, and that boats and their loads were hauled by oxen and vehicles kept for that purpose by the French settlers at Chicago. (Abst., 116.) The report of 1867, to which counsel refer, is that of General Wilson, which stated that the Desplaines, except in floods, was very shallow, being often reduced in dry seasons to a mere brook, discharging less than one thousand cubic feet of water per minute. (Abst., 1072, 2843.) It must be admitted, therefore, that these references do not show "that the actual navigation and navigability of Desplaines River was recognized by the Government in an official report as early as 1819," nor that the Government had ever decided to improve the river for purposes of navigation.

Counsel refer to other reports, all of which have to do with canalizing the river by means of locks and dams. For example, that of Major Benyaure's, who says:

"That the only feasible plan to render the stream navigable is to slack-water the whole distance."

Counsel omit any reference to the Barlow report of 1900, which says:

"That the upper Illinois and Desplaines are at present non-navigable." (Abst., 2855.)

It is not true that the general government has had in contemplation the improvement of the river for purposes

of navigation since 1867. It has made surveys of routes, whether by canal or by the river, for connecting Lake Michigan with the head of navigation on the Illinois, which is at Ottawa; but at no time has it appropriated a dollar for the improvement of the Desplaines River.

X

AS TO THE CLAIM THAT THE REASON WHY THERE WAS
NO NAVIGATION WAS THE EXISTENCE OF DAMS

We pointed out in our original brief that there had been no evidence of any navigation of the river "within the memory of living man." The memory of some of these witnesses went back to the early thirties and we urged that the surest test of the navigability of a river, located in a new country, where there were no railroads, was the use made of it. Counsel seek to avoid the inevitable conclusions to be deduced from the fact that no early settlers used the river, by stating that the erection of dams prevented practical navigation subsequent to 1833. The obvious answer is: that if under the conditions of early settlement, and lack of other means of travel, this stream had been navigable, no dams would have been permitted which prevented its use for the purpose of navigation.

XI

THE "APPENDIX" TO GOVERNMENT'S BRIEF

There is attached to the Government's brief an appendix of 30 pages, being copies of articles which have to do with waterway improvement, and changes which have come over river commerce since paddle-wheel steamers gave way to gasoline propelled boats. It is significant that though for some years there has been no dam in that part of the Desplaines River now under consideration,

no attempt has been made to use any such boats, not even gasoline launches, on that river or the upper Illinois. We submit that if those rivers had been capable of such use, the Government would have demonstrated that fact as the best practical evidence of their navigability. Such a demonstration would have been of much greater value than the theoretical computations of Cooley and other expert witnesses.

XII

CONCLUSION

We submit that the proper application of the Act of 1899, intended for the practical purpose of regulating commerce as it exists today, and having validity only because of the Commerce clause of the Constitution, cannot be determined by resort to legislation which is no longer in force, which was intended to control a situation which has not existed for a hundred years, and which would, as interpreted by the trial court, declare that a stream which was used to any extent in those pre-settlement days, is a navigable water of the United States, without reference to whether any commerce has ever passed over it since the earliest settlement, or ever can pass over it.

Respectfully submitted,

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